

# RECENT DEVELOPMENTS IN THE ORGANIZATION OF HEALTH ACTIVITIES

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Current studies will aid in determining the future status and function of the voluntary agencies. In the meantime they can be guided by certain well-established principles.\*

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SEVERAL years ago a gentleman and his companion stepped into a taxi and directed the driver to take them to the Quo Vadis. Noting a little later that the taxi was going in the wrong direction, he questioned the taxi driver who said, "You want to go to the movie, don't you?" The gentleman responded, "Oh no, I want to go to the Quo Vadis restaurant at 26 East 63d Street." Shortly thereafter the taxicab driver asked, "Well what does Quo Vadis mean, anyway?" The gentleman responded, "Whither goest thou?" Just at that time, as the taxicab driver turned a corner to change his direction, a second taxi cut in on him and only by swerving was the first driver able to avoid a collision; whereupon he stuck his head out of the window and yelled, "You lousy bum, Quo the hell Vadis!"

I think the title of this presentation might well be "Quo the Hell Vadis!" as it relates to voluntary health agencies, to which I shall largely confine my comments.

There seems to be a tremendous concern at the present time with regard to the present and future status and function of voluntary health agencies, as well as voluntary welfare agencies. This concern stems from many factors, among which are: the increased number of such agencies; the increased degree of specialization of many of the newer ones; the increasing role played by government in the health field; the dissolution of the former fairly rigid boundary lines between governmental and voluntary effort; and the apparent proportionate increase of the role of the professional paid worker in the voluntary health agency, versus the role of the true volunteer.

The increase in the number of the voluntary health agencies has raised questions of unnecessary duplication and of increased competition for the contributor's dollar, involving as well increased competition for time and space in the media used to raise funds.

The increased number of agencies devoting their time to very specific pathological entities, which, although extremely serious to those suffering from these entities and to their families, are relatively infrequent in

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\* Presented at the Annual Membership Meeting of the National Society for the Prevention of Blindness, New York, December 8, 1960.

the population as a whole, has further increased the concern with regard to the question of unnecessary duplication of effort and possibly unfair competition for the contributor's dollar.

#### **Increased Government Funds**

The terrific increase in appropriations for medical research, particularly by the Federal government, has raised the spectre of governmental domination of all voluntary effort, particularly in view of the likelihood that very soon similar substantial sums will be made available to subsidize salaries of educators, rather than merely research workers, and for building construction costs and the furnishing of equipment of all sorts. Furthermore, government is increasingly involved in furnishing direct services to individuals and in health education of the public—fields formerly considered to be very much the private domain of the voluntary health agency. There is no longer any clear-cut boundary line between the domain of the government and of the voluntary health agency, except with regard to the actual enforcement of official laws and regulations which obviously are entirely the domain of government.

With increased pressure for efficiency as well as quality of performance, there has been a tendency for more of the work of the voluntary health agency to be conducted by the skilled, specially trained, salaried professional worker, rather than by true volunteers. This has further raised the question of the current and future status of voluntarism (or more correctly, voluntaryism) in American charitable organizations.

Thus one finds that many groups and agencies are taking a serious look at this entire matter. There is a sudden rash of magazine and newspaper articles on the subject, plus publication of books, devoted to this area. Many of you, I am sure, saw the recent TV show on ABC called "The Money Raisers." A number of special studies have been initiated, and several concerned agencies are formulating authoritative statements giving their points of view.

In January a book called "The Gentle Legions," by free-lance writer Richard Carter, will be released by Doubleday and Company. This book, which I commend to all concerned with health activities, gives a careful analysis of the past and present role of voluntary health agencies, and, in my opinion, sets forth the current issues objectively and clearly.

#### **Rockefeller Foundation Study**

A number of foundations have become interested in the problem. A present major effort is that of the Rockefeller Foundation, which has initiated a study on voluntary health and welfare agencies in the United States under the direction of Dr. Robert H. Hamlin, associate professor of public health practice at Harvard University School of Public Health and former assistant to the Secretary of Health, Education, and Welfare. Dr. Hamlin is being assisted in this study by a 21-member committee of very well-known individuals in labor, industry, governmental and voluntary public health work, education, the press and other fields.

At the moment this committee is merely exploring the desirability and practicability of a detailed study of

the entire problem. It will shortly make a report with regard to this exploration, and if it is decided that such a project is feasible and desirable this will be a long range study of considerable depth. Among other issues it will be concerned with such questions as: What is the impact on private agencies of expanding governmental activities in health and welfare? Are research and professional education being adequately and properly supported by voluntary agencies? Are there basic principles and methods of community planning which will encourage reasonable co-operative efforts among private and governmental agencies? Is there a solution to the disagreement between independent and federated health and welfare agencies on fund-raising methods? We will watch the progress of this study with great interest and some concern.

#### **Community Health Services**

The National Health Council in cooperation with the American Public Health Association is planning to embark shortly on an extensive study of community health services, which, it is hoped, will replace the famous but outdated Haven Emerson Report on Local Health Departments of a decade ago. The Council is also making a study of the possible formulation of uniform accounting principles for voluntary health agencies, under the guidance of a very competent, small committee, and a full-time skilled investigator. This latter study is being financed by pooled contributions from a number of the Council members including the National Society for the Prevention of Blindness. If successful, it should

help to eliminate one of the major criticisms of voluntary health agencies, as well as lessen their problems with regard to the reports required by an increasing number of charity regulating state and local governmental bodies.

The National Health Council also has decided that it cannot await the Rockefeller Foundation report with regard to a statement concerning the current role of the voluntary health agency. Furthermore, the Council feels that since the Rockefeller report will involve welfare agencies as well as health agencies, it has a responsibility itself to formulate an up-to-date statement devoted solely to the question of the current role of the voluntary health agency. Preliminary drafts of sections of this statement have already been prepared and are being edited and revised. It is hoped that sometime in 1961 a suitable statement will have been prepared which will be approved by the Council's Board of Directors. Such a statement should be very helpful in clarifying the present blurred image of the current role of the voluntary health agency.

#### **Basic Principles**

In the meantime, while we are undergoing this period of outside inspection and self-analysis, it seems to me we cannot go too far afield if we can identify, formulate and adhere to certain basic principles.

One of these principles, it seems to me, is that regardless of the diversity of the programs of various national health agencies and the variations in their opinions as to the methods of fund-raising, there is an obligation for us to identify health

needs concerning the citizens of this country as a whole; to exchange information with regard to those needs; and to work together in meeting those needs. The best mechanism for this is the National Health Council, which has long received the loyal support of the National Society for the Prevention of Blindness. The Council, in my opinion, is beginning to gain real stature and recognition for the role it is playing along this line. Outstanding among its activities that are pertinent to this objective are the National Health Forums. The Forum to be held here in New York next March is on communication and health ("Better Communication for Better Health"), in all of its multi-faceted aspects, such as: communication between the research scientist and the clinician; the professional health people and the public; the national health agency and its affiliates; the voluntary health agency and the official health agency, etc. It will also consider such pertinent questions as what medium does one use at what time and for what purpose in all of these various problems of communication.

Next year's Forum will be on emergency medical care and accident prevention—again an area of great interest to the National Society as well as to essentially all of the other 70-odd members of the Council. Last year the Forum was on the positive health of older people—again an important over-all general problem of great concern. The 1954 Forum on staffing America's health services resulted in a practical project which is still one of the most useful programs of mutual benefit; namely, the health careers program designed particularly

to get young people interested in some career in the health field, in view of the tremendous shortage of all types of health personnel. Supported by the various member agencies of the Council together with special grants from the Federal government and various foundations, and backed up by substantial contributions in the form of educational materials from the Equitable Life Assurance Society of the United States, this program has made a big impact in this important area of concern to all of us.

Equally important in this need for us to plan together in the interest of the general health of the public are the National Health Council projects concerning community health services, health education, research, and the strengthening of state and local health councils.

#### **Determining the Need**

There are some other basic principles. One is that the important criterion with regard to the establishment and maintenance of a health organization is the need for the service in question. If there is a definite unmet need there should be no objection to the establishment of another agency to meet that need, regardless of how many agencies are in existence at that time. Conversely, of course, if a need really has disappeared, then so, too, should the agency or institution designed only to meet that need.

Another principle, I think, is the right of citizens of this country to band themselves together to do something about a problem which is important *to them*. This obviously ties in very closely with the principle

relating to an unmet need's being the justification for establishing and maintaining an organization. My point here is that it is not for others who have not been involved with the problem under consideration to decide whether or not that problem is important. Who has the right, in other words, to tell the parents of the mentally retarded child, the parents of the child with the always fatal disease, cystic fibrosis, the parents of children with leukemia, and so on, that they have no right to join forces to see if they can't do something about a problem which has brought such terrible tragedy into their own lives?

Another principle, it seems to me, is that there are certain serious responsibilities which must be assumed by those responsible for the organization and administration of a voluntary health agency. Such responsibilities include the formulation and maintenance of a truly democratic form of organization; efficient administration; honest publicity with regard to the problem under consideration; and accurate reporting and accountability to the public which has contributed to the support of that agency.

#### **Eliminating Duplication**

These comments do not mean that I am not concerned with regard to the multiplicity of health agencies, and the so-called splintering of the agencies. It is simply that I feel we cannot be rigid in this matter or we violate principles that are considered of tremendous importance in a country such as ours. I agree that if there are two agencies specifically in the same field, doing precisely the same work,

every attempt should be made to try to consolidate them. In my own field, tuberculosis control, we have been very successful with regard to eliminating duplicating tuberculosis associations nationally and in various parts of the country.

However, merely being concerned with the same problem does not necessarily mean there is duplication. Thus, in your own field, I believe I am correct that you are the only agency dealing primarily with the *preventive* aspects of the problem of the blind. Certainly there would be no reason to suggest that your agency be consolidated, for example, with some agency providing guiding dogs for the blind. I think it is appropriate that the National Society for the Prevention of Blindness, as the agency dealing primarily with the preventive medical aspects, is the only agency in this field which is a member of the National Health Council.

As I was preparing this paper, there came across my desk an announcement of a new group on research in the prevention of blindness. This I do have a little difficulty in understanding, since the National Society for the Prevention of Blindness is also concerned with research re the prevention of blindness. However, I am out of my field and I had better leave this question to you and the new group.

I am less concerned with regard to so-called splinter groups than I am with out-and-out duplication. There are certain agencies with very broad interests, such as the National Society for Crippled Children and Adults. Obviously, many agencies could be considered to be under the general framework of this excellent national

society. However, with such broad coverage and necessarily limited funds and personnel available to that society, no doubt there are particular problems in this field which, if attacked specifically by a dedicated group, will be solved more quickly and more readily than if they have to await the necessarily somewhat limited attention they would receive from the overall organization. The same probably could be said with regard to the National Association for Mental Health and some of the more specific problems in the mental health field, and whether or not criticism is justified must depend upon the question I mentioned earlier of human needs and the degree to which those needs are being met.

There are a number of factors at the present time which make us question the future status and function of the voluntary health agency. We hope to have some better answers reasonably soon. In the meantime if we stick to the basic principles concerning the voluntary health movement in this country, principles which are deeply ingrained in us as citizens of these United States of America, I believe we shall not go too far wrong!

#### OPHTHALMOLOGY FELLOWSHIPS

Six fellowships for residents in ophthalmology, to be awarded July 1, 1961, have been announced by the Guild of Prescription Opticians of America. Each is for a total of \$1,800, payable in monthly stipends over the period of a three-year residency at an approved institution. Application forms and covering information are available from the Guild, 110 East 23rd Street, New York 10. Applications must be received by May 15, 1961.

#### FAMILY PHYSICIAN'S ROLE IN RETINAL DETACHMENT

A recent editorial in the *Journal of the American Medical Association* stresses the role of the family physician in the treatment of retinal detachment. He may have to decide whether an elderly patient can endure long general anesthesia and confinement in bed with a minimum of movement, evaluate the emotional reserve in a patient already apprehensive and depressed by sudden blindness, and participate in long-term postoperative care. He must also be on the alert for possible systemic complications.

A brief synopsis of the pathogenesis and current treatment is included in the editorial since the family physician will be better able to cooperate if he has a general idea of the complex problems involved.

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#### NEW OFFICERS OF PAAO

Dr. Jorge Valdeavellano of Lima, Peru was elected president of the Pan American Association of Ophthalmology at its recent quadrennial congress held in Caracas, Venezuela. He succeeds Dr. Brittain F. Payne of New York.

Vice presidents elected were Drs. Mark R. Marshall, Edmonton, Alberta, Canada; Alfonso Gaitan Nieto, Bogota, Colombia; and Julio Raffo, Lima.

Dr. Benjamin Boyd of Panama is the new executive director of the Association, succeeding the late Dr. Moacyr E. Alvaro and Dr. Renato de Toledo of Sao Paulo is executive secretary for countries south of Panama, succeeding Dr. Jorge Balza of Buenos Aires. Dr. John W. Ferree, executive director of NSPB is a member of the Association's executive committee.

Lima was chosen as the place for the next Interim Congress in 1962, and Montreal, Canada, for the 1964 Congress.

# THE COLORADO EYE BANK

MORRIS KAPLAN, M.D.

Denver, Colorado

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The director of this community project describes the co-operative efforts which are responsible for its success.\*

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THE Colorado Eye Bank is a cooperative project which was instituted in 1958 under sponsorship of the Colorado Society for the Prevention of Blindness, the department of ophthalmology of the University of Colorado School of Medicine, and the Colorado Ophthalmological Society. Like the other 50 or more eye banks now reported to be functioning in the United States it is a repository for enucleated eyes which might be used for corneal transplant surgery, for vitreous transplants or for general tissue research.

The groups involved in the operation of the Eye Bank are deeply concerned that no opportunity for restoring sight shall be lost, and they are keenly aware of the necessity for prompt and efficient action in each case. These eyes must be removed within five or six hours after death. This means that immediately after a patient dies, during the period of greatest grief or shock to the rest of the family, the subject of using the eyes for transplant must be brought up. This must be done either by the patient's doctor (this rarely happens), by the intern on the case, or by the supervisor on the floor of the hospital

in which the patient died. In general the lay public does not know that at death the body belongs to the next of kin. Regardless of what might have been the wishes of the deceased, proper legal permission for use of any part of the body must be obtained from this relative, and regular forms must be signed for the purpose. These are kept in all the hospitals of the city. If and when permission for the use of the eyes is granted, a rapid chain of events is set in motion.

### Eye Bank Notified

The eyelids are carefully closed and taped or bandaged to remain closed. Regardless of the hour the hospital notifies the Eye Bank office which is located in the eye department of the Medical School. The resident physician on call there at the time is promptly notified. He picks up the enucleation materials which are kept sterilized in constant readiness, goes to the hospital where the body has been held for him, and removes the eyes under strict surgically sterile technique. The outward appearance of the head is not changed at all. Each eye is placed in a special bottle containing a small amount of fluid. The physician then takes the bottles back to the Medical School where they are kept in the special blood bank refrigerators.

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\* Presented at the Annual Conference of the National Society for the Prevention of Blindness, Denver, Colorado, March 31, 1960.

In the Eye Bank a list is maintained of surgeons who have asked for this material, and who have specified the degree of emergency involved in each case. If the eyes are obtained during the day the surgeon is notified as soon as the resident has examined them (even before enucleation) to make sure that they are in proper condition for use. If they are removed during the night the surgeon is notified very early in the morning.

#### **Patients on the Alert**

The surgeon then notifies the patient and also the hospital where the surgery is to be done. It is not uncommon for the patient to live a thousand miles away from Denver; but he always manages to come and the hospitals always manage to make room regardless of how crowded they are. Usually within 12 hours after the death the recipient patient is undergoing transplant surgery. If all goes well, darkness gives way to light and the Eye Bank has again justified all of the careful planning, the work and the cooperation.

Most of the eyes we obtain are used at once, but on a rare occasion there is no need of them on a particular day. In that case they are used for transplant surgery research in our eye department, and each time that happens the next operation possibly is a bit more successful. (There are great and exciting potentialities in the research field. For example, new work is now being done in the use of the cornea as a graft to replace the ear drum in a surgical procedure for the improvement of hearing.)

In general, however, we have a waiting list of persons who need these corneas desperately and sit by their

telephones day after day waiting for that call from the surgeon. We find many families of the newly departed just as eager to have eyes used so that some physical part of a loved one may live on, serving to some degree as a solace in death. It is an inviolate rule that we do not reveal the identity of the donor to the recipient.

#### **Record to Date**

As of October 1960 our Colorado Eye Bank, the first to be organized by a division of the National Society for the Prevention of Blindness, has a list of more than 2,125 living donors who have signed over their eyes along with signed permission cards from close relatives. We have accomplished 77 corneal transplant procedures in Colorado, representing three cities, Denver, Colorado Springs and Pueblo. Our eyes have served for 17 operations in Montana, six in Oklahoma, and one in Texas. We have sent 14 pairs to the Eye Bank in Washington, D.C. for a special dehydration procedure. Our shipping containers are placed in 10 hospitals outside of Denver, and we have received great cooperation from the Colorado Safety Patrol in moving them quickly and safely to the city when eyes become available.

Twelve tympanoplasty procedures have been done with material furnished by our Eye Bank. One of our proud accomplishments is our TV film on corneal transplant surgery which has already been seen by many thousands and will be shown to millions eventually.

While many persons are involved in the operation of the Eye Bank its efficient management is due in large

measure to the resourcefulness and energy of Mrs. Marvis Quam, executive director of the Colorado Society for the Prevention of Blindness. She and I, as the director of the Eye Bank, are in constant demand to talk to groups about the project.

Even though incredible progress has been made in sight restoration by corneal surgery within the past few years it is only the beginning. The ultimate goal is the transplanting of the whole eye. Possibly within the lifetime of some of us this fantastic dream may become reality.

## Facts and Fancies about Strabismus

In his excellent article, "Management of Strabismus" published in *GP*, August 1959, Dr. Edward A. Dunlap of the Cornell Medical School explains this highly complicated condition to the general practitioner and the pediatrician. Since they are usually the first medical persons to see the child with squint, Dr. Dunlap is especially anxious to clear up the misconceptions about this defect. As he explains the purpose of his paper, it is to urge the general practitioner confronted with a strabismus "to demand and obtain early examination and treatment of the patient by the ophthalmologist."

Dr. Dunlap then offers two lists: the fancies and the facts about childhood strabismus, as follows:

### FANCIES

The ophthalmologist need not see a child with an imbalance until age 2 or after.

Waiting for the turn to be outgrown is proper.

Surgery should not be done until after age 6 or 8.

Glasses will correct all inward turns.

Glasses will not correct any turns.

Glasses will restore acuity in an amblyopic eye.

"Exercises" are of no value in the treatment of strabismus.

Two or more operations are usually required in an ordinary case of strabismus.

No harm is done a child's personality by allowing him to retain a disfiguring strabismus until he is 8 years old or thereabouts.

### FACTS

The earlier treatment of an imbalance is started, the more chance there will be of a good result.

Turns are rarely outgrown and there is *no* justification in advising waiting to see if this will occur.

If amblyopia is found, treatment must be instituted before the age of 5 or 6 for it to have a good chance of success.

Surgery is usually the best treatment and early surgery is preferable to late. By early is meant ages 1 to 4, depending on the age of onset and the type of the turn.

Cosmetic aid can almost always be given by surgery. This alone is enough to justify operation. Functional benefit may also occur, and the earlier alignment is secured, the more chance there is of functional aid.

Muscle surgery can be done with extremely little risk of complications.

Elimination of the turn before the child is made aware of it by the persecution of his playmates can save the child untold tragedy.

# CATARACT—SOME FACTS for the PATIENT

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New York, N.Y.

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Although modern surgical treatment of cataract is safe and highly effective a considerable percentage of persons with this condition resist the operation because of fear or misunderstanding. Others are greatly discouraged following surgery because the need for adjustment to lens replacement has not been explained. This article deals in simple terms with facts that will help the patient appreciate the benefits of the operation.

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THE term cataract is applied to any clouding of the lens in the eye that interferes with vision. Such opacities found at birth or occurring during the eye's development are called congenital or developmental cataracts. A smaller group includes those cataracts which result from injuries, inflammations, or other disease processes. By far the largest number, however, are associated with the aging process and usually occur after age 50.

In order to understand the cataract problem it is helpful to know something of the structure of the eye. As shown in the diagram, it is spherical and contained within a tough white protective covering called the sclera. A clear front window in the sclera is called the cornea. The colored iris lies behind the cornea and in front of the lens, which is held in position by ligaments.

The retina is the nerve layer on the rear inner wall of the eye that receives images and relays them to the brain through the optic nerve. Vision requires the free passage of light rays through the lens, which focuses the rays on the retina.

Elimination of a cataract involves removal of the clouded lens and replacement with an artificial lens (spectacle or contact).

## First Symptoms

The effect of a cataract is partly to reduce the amount of light entering the eye. Some people at first complain that they are not able to get a light bright enough to read by; vision is poor unless constantly increasing illumination is used. When light strikes the clouded lens it is scattered and produces a dazzling effect under high illumination. This may be particularly troublesome at night when bright lights are surrounded by dark zones.

A particularly puzzling symptom occurs when the opacity is located near the center of the lens. In such cases the patient often has good vision for distance because the pupil dilates and allows the visual lines to pass around the opacity. When he tries to read, however, the pupil becomes small and the cataract blocks his vision. Such patients cannot understand why their distance vision is good and their reading vision poor;

and often they have many changes of glasses within a short period.

Sometimes an advanced cataract can be detected by an observer. The pupil, which should appear black, then assumes a grey or white or milky appearance. Usually the patient himself is not able to see this condition.

#### Treatment Techniques

Many medical treatments for senile cataracts, those associated with aging, have been proposed and tried but so far none has been successful in reducing or removing the opacity. The only known effective treatment is the surgical removal of the clouded lens. In the early days of such surgery it was thought that a cataract had to become ripe (the lens completely clouded) before it could be removed successfully. With the advance of surgical technique it is no longer necessary to wait for any particular stage of development. Now the operation is usually performed when the other (normal) eye is no longer able to serve the patient satisfactorily. Under certain conditions a cataract that is allowed to remain in the eye may cause trouble. In such cases removal may be indicated even though the patient's sight in the other eye is still satisfactory.

A different technique is required in the treatment of congenital or developmental cataract. The lens in the eye of the very young cannot be removed in a single piece, as in older individuals, and therefore nature is called upon to help. The lens is opened by any one of several surgical procedures which are minor as compared to the extraction in adults. Nature then absorbs the mass of cataractous material from the interior of the lens and it gradually becomes clear. Oftentimes the absorp-

tion is not complete after one opening of the lens and it may be necessary to repeat the procedure.

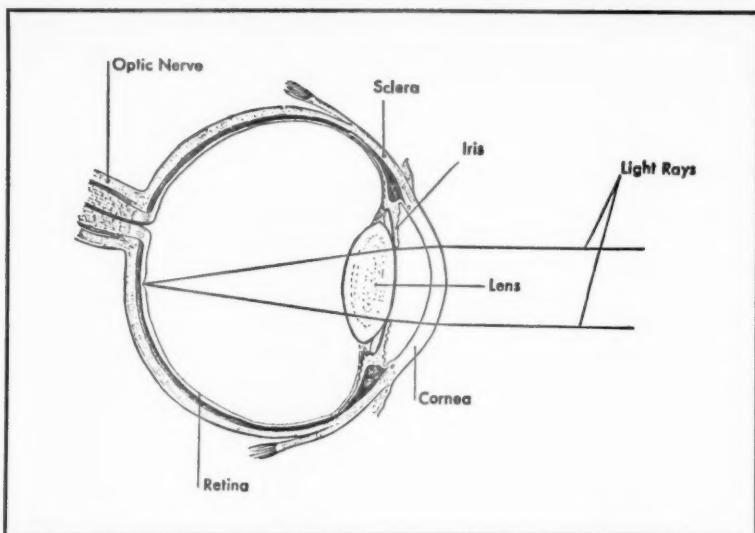
It is impossible to discuss here the treatment of cataract associated with injury, inflammations, or other eye disease since it varies widely with individual conditions.

#### Indications for Extraction

In general, whenever cataracts interfere with a person's vision to such an extent that he cannot carry on his normal activities they should be removed. Usually only one eye is operated on during a hospital stay although both may be done. If the individual gains sufficient vision from one extraction he may elect not to have the second.

It should be understood that if a cataract is eliminated from one eye while the other eye still has acceptable vision the two eyes will probably not be used together thereafter. This is because the image in the cataract-free eye is larger than the one in the normal eye. While some patients gain similarity in image sizes by wearing a contact lens on the eye from which the cataract has been removed, this is not satisfactory in all cases. Many times a person with two cataracts, one farther advanced than the other, will find it advantageous to have the denser cataract removed even though he still has good total vision. This procedure enlarges the visual field and improves perception of large objects by the cataract-free eye. Other individuals similarly affected will choose surgery in order to have a cataract-free eye to fall back on if the other eye declines in vision as its opacity worsens.

Loss of vision from other causes may occur along with the develop-



How light rays bend as they pass through the lens of the normal eye.

ment of cataract. If a complete examination of the eye has not been made prior to the discovery of the opacity, the capability of the eye after cataract removal can only be guessed at. This is particularly true of the very elderly whose eyes have harbored cataracts for an extended time, and in individuals with diabetes.

The opinion of doctors varies as to removal of congenital and developmental cataracts. Usually if vision is good in one eye when the other contains a cataract nothing is done. If both eyes are affected but vision appears adequate no operation is performed unless the cataracts show signs of becoming progressively denser. However, if both eyes have cataracts and the vision is poor or borderline then probably the earlier they are removed the greater is the chance of development of good vision with the aid of glasses.

#### Hospital Stay

Most operations for senile cataract are done under local anesthesia. The patient is no longer placed in sandbags or other restraints and is allowed to be out of bed within one or two days after surgery. Usually only the eye which has been operated on is covered. The hospital stay varies from five days to two weeks.

Vision after cataract extraction is quite poor until the eye has recovered sufficiently to have a corrective lens fitted. A temporary lens is usually provided about two weeks after surgery; the permanent lens four to six weeks later.

Surgery for congenital cataracts is usually done under general anesthesia but the operation takes less time than the one for senile cataract. Only light anesthesia is necessary and the patient can leave the hospital within one to five days after surgery. Observation of

the case at weekly or monthly intervals follows in order to determine whether further procedures will be necessary.

#### Adjustment after Surgery

The patient experiences a noticeable change in vision after cataract extraction. The thick lenses which he must wear have a tendency to distort straight lines so that doorways, for example, appear narrow. Judgment of distances is difficult. Relearning to gauge size and distance is a brain function and it may take six months or longer, depending on the patient.

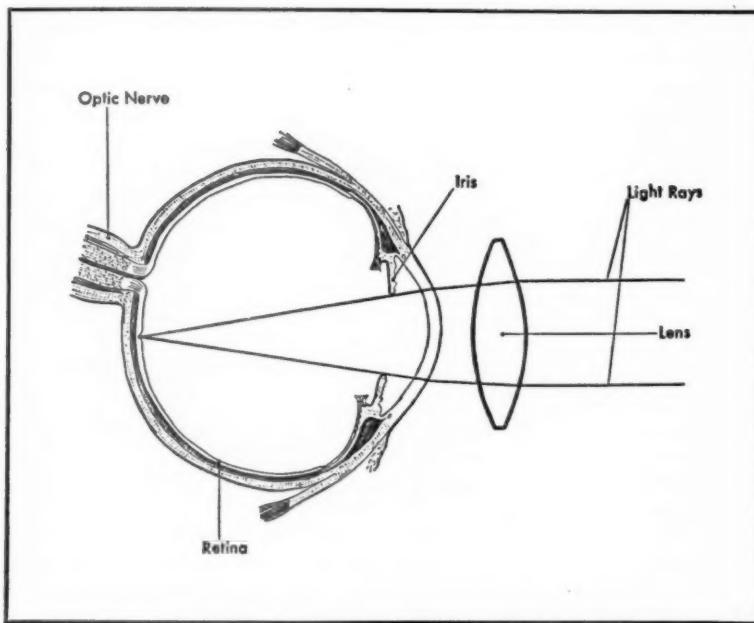
Many individuals are discouraged during the early part of this period and require considerable reassurance. Infants and children whose prior sight experience was limited have much less

trouble in adjusting to their new vision. Recent advances in the shaping of the corrective lenses, the use of plastic lenses, and the progress with contact lenses are serving to minimize the difficulties which cataract patients have.

#### Advances in Surgical Technique

While the removal of a cataract is a serious and delicate operation, hospital records show that it is successful in more than 90 per cent of the cases. The chances for success are excellent if the eye is in a healthy state and if the general physical condition of the patient, regardless of age, is good. Skillful surgery and subsequent correct fitting of lenses are essential.

Within the past few years new sharper needles and strong absorbable



How light rays bend as they pass through the eyeglass in front of the eye after the cataract has been removed by surgery.

sutures have been developed. These make possible a tighter closure of the wound and thus permit greater freedom for the patient after the operation. Since these sutures do not have to be removed, one step in the procedure following the operation is eliminated. Use of antibiotic medication before and after surgery has reduced the incidence of infection and made the operation much safer. Recently an enzyme, alpha chymotrypsin, has been used successfully to soften the ligaments that hold the lens in place, facilitating the removal. This technique may be particularly helpful in young and middle-aged adults for whom the operation is prescribed.

#### Methods of Prevention

Cataracts caused by injury or long exposure to heat in certain industrial operations can be avoided by removing the hazards or providing adequate protection against them.

Medical records show that cataracts and other defects may occur in certain infants whose mothers have had German measles early in pregnancy, indicating the necessity of avoiding exposure to this disease during this period.

Cataracts caused by the aging process cannot now be prevented. Research is going forward which in time may provide the answer. In the meantime it is reassuring to know that the present surgical treatment is safe and highly effective and can be approached by every patient with confidence.

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"The Nurse—Her Role in Eye Health" is the title of a pamphlet available from NSPB. Publication No. 137; 12 pages; price 10 cents.

#### MEDICAL RESEARCH SPENDING CALLED PENNY-WISE

A cent for prevention against a dollar in medical costs—this is the American health pattern as presented in the "annual audit" of the National Health Education Committee. Mrs. Albert D. Lasker, head of the committee, urged greater Federal, state and local appropriations for research and larger contributions to voluntary health agencies.

The audit pointed out that disease and disability cost Americans 35 billions a year, while Federal support of research through the National Institutes of Health is only 400 million. This means that every man, woman and child in the country pays **\$194.44** for illness, against research appropriations of **\$2.22**.

Estimates of the number of Americans with eye disabilities are included in the audit. There are now 345,000 totally blind (legally) and 1,500,000 blind in one eye. Seventy million Americans wear glasses, and nine million children need eye care, the report estimates.

The 52-page audit is available from the Committee at 135 East 42nd Street, New York City, at **\$3.25**.

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#### APHA MEETING DATES

The Executive Board of the American Public Health Association announces that the 1961 annual meeting will be held November 13-17, at Cobo Hall, Detroit, Michigan.

The 1962 annual meeting of the Association is scheduled for October 15-19, at the Hotel Fontainebleau, Miami Beach, Florida.

Headquarters of the Association are at 1790 Broadway, New York 19, N.Y.

## Low Vision Rehabilitation Center Serves a Wide Area

SIDNEY WEISS, M.D.

Ophthalmologist in Charge  
Low Vision Rehabilitation Center

EDYTHE K. MOORE

Director, Prevention of Blindness Department

Pennsylvania Working Home for the Blind  
Philadelphia, Pennsylvania

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Established two years ago in Philadelphia, the Center has an encouraging record of success in improving visual acuity of patients.

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THE Low Vision Rehabilitation Center at the Pennsylvania Working Home for the Blind in Philadelphia has been in operation since August 1958 under Selected Demonstration Project Grant No. 276 of the Federal Office of Vocational Rehabilitation. Neale R. Curtin, executive director of the Home, is the present project director.

Establishment of the Center was based on the recognition by leading ophthalmologists who serve on the Working Home's medical advisory board that such a service would increase the efficacy of the vocational rehabilitation program which has been in operation there for twelve years.

The Center has as its primary objective the rehabilitation of the visually handicapped and the blind by direct application of the latest knowledge and techniques in prescribing low vision aids. Improving the residual visual acuity of these persons increases their opportunity for employment or their efficiency within a present job situation.

To date we have examined 256 patients who averaged three-and-a-half visits before we either prescribed

an aid or exhausted the possibilities of increasing vision. Many of our patients are elderly, others are young; so it is necessary for us to work some time with each one in order to get the proper responses to the various testing devices. All patients cannot be reported on at this time; some are still coming to the Center for evaluation; in other cases prescriptions have not yet been filled.

### Results Obtained

The accompanying tabulation of persons examined shows that our best results have been obtained in macular degeneration, congenital cataract (aphakia) and early diabetic retinopathy. The poorest results have been in optic atrophy and retinitis pigmentosa. These findings seem to agree with reports from other low vision clinics.

The Center is equipped with a slit lamp, keratometer and tangent screen, as well as a complete refraction set. We have also been evaluating the Keeler aspheric and telescopic lenses, and the American Optical and Univis lenses. The Keeler aspheric bifocal holds much promise

since it is made of light-weight plastic and has cosmetic acceptability. We have recently devised a hook-on frame made from plastic sunglasses with holes drilled in the center of the lenses so that an aspheric button of various powers may be inserted and used over the patient's regular distance correction for reading. The use of specially designed three-meter charts graded from 20/500 through 20/320, 20/260 and 20/200 and then on up to 20/20 has made the determination of distance visual acuity more accurate.

In addition, a special near vision chart used in conjunction with Keeler's table of assessed magnification has taken some of the guess work out of this portion of the examination and therefore gives the examiner a more definitive idea of the individual requirements for improving visual acuity.

#### **Types of Aids**

Following are the types of aids that have improved the vision of patients examined:

| Type of Aids                                    | No. |
|---|-----|
| Aspheric bifocal .....                          | 49  |
| Hand magnifiers.....                            | 18  |
| Sports glasses or telescopic for distance ..... | 12  |
| Binocular telescopic for near ..                | 10  |
| Unocular telescopic for near ..                 | 8   |
| Near and distance telescopic combination .....  | 3   |
| Contact lens .....                              | 2   |
| Amber filter.....                               | 1   |
| Total .....                                     | 103 |

Referrals to the Center continue to come from various sources: ophthalmologists, public and private social agencies, public health and

school personnel. We have had some excellent radio and television publicity and as a result are reaching more and more of the visually handicapped. The New Jersey State Commission for the Blind has sent us many patients.

Recently we were successful in our long-time effort to have the Philadelphia Board of Public Education send the children enrolled in sight-saving classes to our Center. Six of these pupils have been examined and two will be transferred to regular classes; the other four are still being evaluated. We believe that our work with partially seeing children will prove to be a great advance in low vision rehabilitation work. They will be aided both visually and psychologically, and become more secure and emotionally stable despite their physical handicaps.

#### **Interest in the Project**

Many visitors have inspected our Center, one from as far away as Israel, all interested in what we consider to be the finest project we have ever attempted. Its success, we feel, is based on our excellent equipment, an optician capable of fitting the aids properly and a dedicated social worker. Each applicant is carefully studied to determine whether he or she is motivated to accept improved visual acuity and cooperate with the ophthalmologist and social worker for the best results possible. Frequently individuals come to the Center with special family problems other than blindness. These cases are carefully screened and if necessary are referred to another agency before appointments for the low vision test are made.

## RESULTS OBTAINED WITH VISUAL AIDS IN 203 CASES

| Diagnosis                      | Total No. | Aided | Not Aided | No Aid Needed |
|--------------------------------|-----------|-------|-----------|---------------|
| Macular degeneration           | 45        | 29    | 12        | 4             |
| Optic atrophy                  | 23        | 5     | 15        | 3             |
| Congenital cataract (aphakia)  | 21        | 14    | 6         | 1             |
| Diabetic retinopathy           | 21        | 13    | 7         | 1             |
| Myopia and myopic degeneration | 14        | 9     | 4         | 1             |
| Retinitis pigmentosa           | 13        | 4     | 7         | 2             |
| Glaucoma                       | 12        | 5     | 7         | 0             |
| Senile cataract                | 10        | 4     | 6         | 0             |
| Chorio-retinitis               | 8         | 5     | 2         | 1             |
| Kerato-iritis and uveitis      | 8         | 3     | 5         | 0             |
| Corneal scars and opacities    | 5         | 1     | 4         | 0             |
| Interstitial keratitis         | 5         | 1     | 4         | 0             |
| Albinism                       | 4         | 2     | 1         | 1             |
| Retinal detachment             | 4         | 2     | 2         | 0             |
| Corneal dystrophy              | 3         | 1     | 1         | 1             |
| Retinal vascular lesions       | 3         | 3     | 0         | 0             |
| Congenital nystagmus           | 2         | 1     | 0         | 1             |
| Retrolental fibroplasia        | 2         | 1     | 1         | 0             |

We have been fortunate in having special funds for the purchase of glasses for needy patients. This money has been contributed by interested individuals and agencies. Each patient is urged to pay for his own aid, either in full or part, but if that is not possible we underwrite the expense.

The following brief case histories illustrate the value of the work:

Case 64—A middle-aged man, well known in the Pennsylvania area for his acumen in selling insurance, and the winner of an award in this field, is almost blind. Formerly he had to memorize his rate-book made up in braille. With aspheric lenses he can now read his rate-book, and is so enthusiastic about his glasses he has ordered a second pair as a spare.

Case 71—A young girl who was graduated from a school for the blind, later came to the Center and was fitted with aspheric lenses. She is now attending business college, competing with sighted students and doing well.

Case 92—An elderly man sells door-to-door for another blind agency. He could not write his own orders when he came to us for help. Now wearing aspheric lenses

he has no difficulty with his orders and he reads his Bible daily.

Case 131—A young girl of 17 who is an albino in a family where albinism is prevalent applied to the New Jersey State Commission for the Blind for rehabilitation. She had attended sight-saving classes through the ninth grade. After being fitted with aspheric lenses she was able to read newsprint; is now employed in our factory inspecting industrial brushes.

Case 208—One day the above gentleman (case 92) knocked on the door of a woman who had had to struggle through college with a clumsy hand magnifier. She learned all about the glasses he was wearing, was seen in the Center and is now able to read newsprint for the first time in 20 years. She plans to return to substituting as an elementary grade teacher.

We feel that our Center has filled a definite need here in the Delaware Valley area. The partially seeing and blind in our factory, those in our vocational rehabilitation program for newly blinded men and women, and the public as a whole have benefitted from this unique service.

## GOALS IN BLINDNESS PREVENTION

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However successfully an individual overcomes the handicap of loss of sight he pays a high price; and there is every reason for giving him a better battleground for fighting a good fight.

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“PREVENTION of blindness is one area in which we all ought to be frightened of anything that might be too little or too late.” Joseph Hunt, assistant director of the Office of Vocational Rehabilitation, Department of Health, Education, and Welfare, emphasized this point strongly in an address at the 50th Anniversary luncheon of the Maryland Society for the Prevention of Blindness last April.

“I feel deeply the need for this work,” he said, “because every year I see and talk with thousands of blind people, so many of whom have lost their sight unnecessarily. Constant association with the tragedy of blindness leaves no doubt that prevention efforts should be vigorously supported in every community in the United States.”

Mr. Hunt said he was happy to report that there are hopeful signs of an awakening to the great needs in this field. The National Institute of Neurological Diseases and Blindness spent \$3,900,000 last year for research on eye diseases. Important studies include the one on toxoplasmic uveitis on which Dr. Alan C. Woods and Dr. Leon Jacobs are now collaborating, and the five-year glaucoma study for which the Institute recently allotted \$115,000. In the Baltimore area approximately \$140,000 is now being spent in research grants in ophthalmology. In addition much important

research is going on under private auspices.

One of the great problems is recruitment and training for ophthalmic research and practice. The National Institutes of Health allocated \$70,000 last year for nine postgraduate traineeships in ophthalmology in addition to the \$1,000,000 granted 37 medical schools for 340 trainees in ophthalmology. The Veterans Administration is spending \$275,000 for the training of 73 residents in this specialty.

“In emphasizing the tragedy of blindness,” Mr. Hunt said, “I do not wish to imply that rehabilitation of the blind is unsuccessful. It is difficult because of the severe physical loss and, sometimes, the psychological complications, but in many cases the results are heartening. In *OVR Facts in Brief* we report some figures for the past several years:

“In 1955 a total of 2,834 persons earned \$683,000 before rehabilitation, \$4,929,000 after; an increase of 662 per cent.

“In 1956 persons numbering 3,122 earned \$753,725 before, \$5,951,500 after rehabilitation; an increase of 663 per cent; and 3,216 persons in 1957 earned \$775,800 before, as compared to \$6,155,600 after; an increase of 693 per cent.”

Mr. Hunt offered in evidence a statement made by Dr. Gabriel Farrell, director emeritus of the

Perkins School for the Blind, at a conference of workers in this field.

"A little over a month ago," said Dr. Farrell, "I attended the reunion of the Perkins alumni and alumnae, meeting jointly, and as I mingled with this large group, I could not help comparing them with similar groups of nearly thirty years ago. With every evidence of poverty, many then seemed worn by the struggle in a world in which they were a class apart. Today's group were alert, well-dressed, and confident. With joy, they told me of their jobs, their homes, their wives or husbands and children. Except for an occasional cane or dog, nothing marked this group as different from others."

#### **Rehabilitation Not Easy**

In the United States, Mr. Hunt reported, there are more than 25,000 blind persons who are working at regular jobs or running their own businesses. But these successful ones did not come by rehabilitation easily. We must remember that some 350,000 of our fellow Americans are blind, and despite prevention efforts an estimated 29,500 continue to lose their sight each year. There are other thousands whose sight is so limited as to be a severe handicap for employment.

A booklet, "Opportunities for Blind Persons and the Visually Impaired through Vocational Rehabilitation," published by the Office of Vocational Rehabilitation lists the names and addresses of the 54 state agencies which are prepared with Federal and State funds to aid in this training.

Mr. Hunt stressed the kind of personal, informed voluntary action which changes certain patterns. Blind-

ness is subject to control by such action. Through members of prevention of blindness agencies many persons in the community are reached, and they, in turn, reach still others. Personal concern is the vital factor.

"I think I speak from strength on this subject," he added, "because I come from an office where the results of blindness and its fearful undertow of dependency are evident. Not merely financial dependency is involved, but emotional and social dependency as well.

"A story is told of one rehabilitation center for the blind which did an exceptionally good job and was sending out a superior graduate. Let me turn that around. The graduate had done an exceptionally good job, with the help of a superior center. The individual's family was having an interview with the director of the center and was quite amazed to hear the number of things the blind individual could do. Just before leaving, one of the relatives asked a final question of the director, saying: 'Isn't there anything which must be done for him?' There was a long silence, and then the director said: 'He still needs his letters read to him.'

"Now think about that. Just having all your letters read to you for the rest of your life by someone is a severe encroachment upon the type of freedom we all enjoy without thinking about it. The thought of losing this particular freedom is more than a little breathtaking. How can a person submit to such an experience without occasional resentment, even of the very best help?

"One of our most serious rehabilitation problems is an individual's certainty that with better medical infor-

mation at the right time he need not have lost his sight. The resolution of internal conflicts in this area is a stupendous achievement of the human character. However magnificent a few people may have become through achieving equanimity in the face of knowledge that sight might have been saved and was not, there is every reason to give human beings some more productive battleground than this for fighting a good fight. In some cases where sight is restored through modern surgical procedures joy is unbounded. Isn't it a strange paradox, however, that we do not know the same joy when the loss is prevented!"

#### **Promise of the Future**

Prevention of blindness societies, Mr. Hunt concluded, will have help in the future that they have not had in the past. Much remains to be done, but new scientific discoveries and a greater public awareness of the need for conserving sight will facilitate progress.

### **SCREENING IN INDUSTRY**

Through routine screening by physicians in occupational medicine the complete or partial blindness resulting from glaucoma could be reduced by 50 per cent, Dr. Eugene J. Ryan, medical director, Belle Works, E. I. DuPont de Nemours & Co., Charleston, W. Va., told the 12th annual meeting of the American Academy of Occupational Medicine in Williamsburg, Va.

As reported in *Scope Weekly*, Dr. Ryan emphasized the importance of such projects in view of the probability that during the next decade the majority of the country's working population would be involved in some

area covered by occupational medicine. He added that by making employees, and thus their families, aware of glaucoma a further reduction by 20 to 25 per cent of the end results of the disease could be achieved.

During the first phase of a screening program over an 18-month period in a chemical plant with 3,000 employees, Dr. Ryan stated, the medical staff found 41 cases of chronic glaucoma. The tonometer was used routinely in all physical examinations.

### **COURSES AT INSTITUTE**

The Institute of Ophthalmology of the Americas of the New York Eye and Ear Infirmary announces the following courses:

**RETINAL DETACHMENT SURGERY** by Prof. Ernst Custodis, director eye clinic, Academy of Medicine, Dusseldorf, Germany. Three lectures to be given March 27-29, 1961. Fee \$30.00.

**PLEOPTICS** by Dr. Heinz Gortz, docent, Academy of Medicine, Dusseldorf, Germany. Two lectures to be given March 30-31, 1961. Fee \$20.00.

Applications may be made to Mrs. Tamar Weber, registrar, 218 Second Avenue, New York 3.

### **OPPORTUNITY FOR MEDICAL SOCIAL WORKER**

In connection with its prevention of blindness program the Pittsburgh Branch of the Pennsylvania Association for the Blind has a position open for a trained medical social worker. Responsibilities relate to case work services and a community education program, and the candidate must be able to drive a car.

Inquiries should be addressed to Mrs. Marcella C. Goldberg, director of welfare services of the Pittsburgh Branch, 308 South Craig Street, Pittsburgh 13.

# TEACHING OPHTHALMOLOGIC NURSING

LYDIA BOSANKO, R.N.

Associate, Department of Nursing  
Faculty of Medicine, Columbia University

*Experiences in many aspects of nursing care afford a good background for intensive preparation in the management of patients with eye problems.*

THE professional program in the Department of Nursing, Faculty of Medicine, Columbia University prepares qualified young women to practice nursing effectively in hospitals and homes, and in the various types of health agencies. Nursing is interpreted as including health promotion through education, care of the sick and injured, and their restoration to a useful place in society.

All students in the department are candidates for the Baccalaureate of Science degree. Prior to entering each has had 60 credits in liberal arts at a college or university, with a good distribution in the social and biological sciences and the humanities. The professional part of the curriculum draws upon these learnings to help the student understand the nurse's role in helping to meet community needs.

The faculty of the department feels that the curriculum should provide for learning experiences in the prevention and nursing management of ophthalmologic problems. This specific emphasis is offered in the last year, but the whole program provides a diversified background of knowledge related to ophthalmology that enables the student to comprehend to a greater depth the problems of the individual,

the family and the community. We are most fortunate in having the facilities of the Institute of Ophthalmology and the Eye Out-Patient Department of Vanderbilt Clinic as well as the specialized community resources of New York City from which to select learning experiences. By the time the student reaches her third year she has acquired various aptitudes and knowledges and learns how to apply them to the specific area of ophthalmologic nursing.

## Meaning of Illness

During the first year the student learns about the meaning of illness and the behavioral responses to it; she sees the impact of individual personality patterns and the part cultural influences play. In the area of communication she learns how to observe and to use judgment in handling what she sees; how to communicate with the patient, his family and other members of the health team. Knowledge of the physical and biological sciences is drawn upon for understanding of diseases—what is normal, what is a deviation, and the meaning in relation to physiologic or chemical changes.

The student is guided to look at disease from the viewpoint of epi-

demiology, therapy, and programs of care within the hospital setting and in the community. Various nursing skills and the utilization of teaching opportunities and resources are introduced as facets of total patient care. These learnings are developed here, as in the following years, through correlation of classroom content, experiences in the clinical setting, outside study, and analysis of the needs of patients under care. Basic studies in anatomy and physiology include the eye and its functions. The roles of nutrition, dietetic habits, posture, body mechanics and general hygiene are studied in relation to maintenance of good health.

Pharmacology and medical and surgical nursing classes introduce the student to the relationship between systemic and eye diseases. Care of the eyes is included in various discussions of comatose, diabetic and surgical patients, and those suffering from infectious disease.

#### **Maternal and Child Health**

During half of her second year the student's experiences are in the area of maternal and child health. Much of the emphasis is on family relationships. Another point of concentration is the study of growth and development through to the period of adolescence. The student learns normal patterns and how to recognize and deal with variations which result from health needs.

In the maternity experience she learns the importance of prophylactic care in the prevention of ophthalmia neonatorum; she is taught to recognize abnormalities in the appearance of the infant's eyes; and to understand sound nutritional patterns for mother and child. In pediatric classes and

clinical practice every student studies and observes careful oxygen regulation in the premature nursery as a safeguard against retroental fibroplasia.

In other areas there are discussions on development of vision, subnormal symptoms, strabismus, and congenital eye diseases; also on the therapy employed in these conditions. Further studies relate to safe toys; prevention of accidents in home and school; control of contagious eye disease; and good eye health practices (routine examinations, good lighting, proper reading material, for example).

The other half of the second year's program is planned to increase the depth of the student's approach to recognizing and meeting the needs of patients in the medical-surgical areas. She is placed in contact with the specific problems of the geriatric patient and broadens her basic knowledge in non-clinical areas—as in a study of the nurse's role in selected community problems.

The overall program, culminating in the third year, enables the student to identify needs of patients, plan and administer care, and evaluate the results. It implies the ability to work with others and to assume responsibility for seeing that nursing needs are met. Many experiences provide a good background for ophthalmologic nursing. In the admitting emergency clinic, for example, the student reviews first aid measures and the recognition of disease symptoms. In public health study she may practice visual screening in schools, or see patients with varying degrees of visual handicap in their own surroundings. Community agency or hospital resources may be drawn upon. In fact, there are innumerable opportunities for practic-

ing and teaching eye health and the prevention of blindness.

#### **Specific Ophthalmologic Experience**

During the third year a 12-week course, Nursing in Selected Long Term Illnesses, is offered. In this the student learns how to aid the patient with physical handicaps. Emphasis is primarily on the many social, economic, rehabilitative and other problems which are involved in restoring such patients to a functional place in society, specifically problems found in the areas of neurology, orthopedics, otolaryngology and ophthalmology. The student adds to her knowledge in a new setting and applies previous learning in cases where diseases may be more disrupting, more emotionally and physically traumatic to patient and family, and more demanding than she has previously experienced. Case presentations and discussions provide depth and understanding; theory and practice are concurrent throughout.

This course increases ability to meet needs of patients who require services of several members of the health team; and it broadens the approach to comprehensive care, including preventive, maintenance and restorative aspects.

Orientation is given each student as she begins the ophthalmologic nursing experience, including physical aspects of the work areas; history; diagnosis; plan of treatment; and analysis of patient needs.

#### **Classes in Theory**

Theory classes are taught by an ophthalmologist. There are three hours of lectures specific to ophthalmology, during which selected diseases and conditions are discussed with respect

to etiology, pathology and therapy. Subject matter correlates with practical experience or observations which the student can make on the wards.

The relationship of ophthalmologic conditions to otolaryngologic, neurologic and other disorders is pointed out by the specialists in the various disciplines who participate in the course, and followed through in nursing care discussions with the instructor. The student also has the opportunity to increase her understanding and follow patient progress by observing and/or participating in doctors' rounds, where the head nurse or instructor is available for clarification and teaching.

In nursing care discussions measures are considered for the patients with whom the students are in contact. The discussions include emotional aspects encountered, observations in regard to feeding, ambulation, hygiene, occupational therapy; and agencies which are or might be used in total care. Ophthalmologic diagnoses generally include the patient with cataract, detached retina, glaucoma, strabismus and infection. Problems associated with tumor, keratoplasty, congenital conditions, injury and the like are discussed in additional conferences.

One class focuses on medications used in the eyes in the form of drops and ointments. Methods of instillation are demonstrated and then practiced by the students. Nursing treatments are discussed and demonstrated: eye baths, warm compresses, microtherm therapy and dressing techniques. Supervised clinical practice in the ward settings is planned so that the students gain skill in such treatments.

Under close supervision each student has the opportunity during a two-week period to care for eye pa-

tients in the hospital and the outpatient department. Emphasis is placed on experiences that are not available in the ward settings: use of the Snellen chart and the E test; observation and assistance with minor surgical procedures such as chalazion and pterygium removal; treatment of extraocular foreign bodies; taking of visual fields; muscle clinic procedures; refractions; also follow-up appointments for patients. The teaching of patients and their families is emphasized and the student is encouraged to instruct in treatments and general eye health. The use of the hospital social service department and various community agencies is illustrated and integrated.

No operating room experience in eye surgery is provided, but operations are observed from the gallery while the instructor explains various procedures and reviews with the student pre- and post-operative nursing care. Other observations are made in visits to the occupational therapy department and the eye bank in the Institute of Ophthalmology.

Each student submits a patient-care study, including a complete picture of the hospital stay, nursing care and rehabilitation plan.

#### **Final Seminars**

During the last six weeks of the course a series of seminars is held at which students present findings from research and clinical practice in the management of patients with physical handicaps. The seminars on ophthalmologic problems include such aspects as the effect of blindness on the patient and his family; reactions to decreased vision; training or rehabilitation of patients with congenital or acquired

blindness; community and national agencies available for aid to the blind; eye health; prevention of blindness. These sessions draw upon the student's experience with patients whenever possible, and resource persons join the groups for discussion.

To supplement the various types of instruction students are given study guides and a bibliography which help strengthen or reemphasize specific areas.

Evaluation of the student herself is based on experience and progress reports of clinical practice; written and oral assignments, with consideration given to presentation and content; and two written examinations.

Most students seem to benefit from their contacts with ophthalmologic patients, and they draw upon the knowledge gained when nursing in other areas during and after the formal program. The experiences provided in different settings afford a comprehensive view of all aspects of nursing care and develop the wide range of abilities necessary for effective functioning as a graduate nurse.

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#### **SUNGLASSES MAY CREATE HAZARD**

The National Safety Council warns that the new style of women's sunglasses with wide frames can reduce road visibility. Several automobile accidents are reported to have happened because the drivers involved were wearing such glasses.

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#### **1961 NSPB CONFERENCE**

**April 12-14**

**Barbizon-Plaza Hotel**

**New York City**

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**The Sight-Saving Review**

# MENTAL HEALTH FOR CHILDREN WITH VISION DISABILITY

HELEN GIBBONS, M.A.

Consultant in Education

National Society for the Prevention of Blindness

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The special teacher is a key person in helping the child to build on strengths where possible and to accept limitations in a realistic and practical way.\*

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IN NOVEMBER 1959 the 14th General Assembly of the United Nations approved the Declaration of the Rights of the Child. One of the articles states that "a child who is physically, mentally or socially handicapped shall be given the special treatment, education and care required by his particular condition." Another affirms that "he shall be given an equal opportunity to develop abilities, individual judgment, a sense of moral and social responsibility, to become a useful member of society." This proclamation is one more example of the concern which the civilized nations of the world have for the welfare of all their children.

In the United States for most of the present century the child with vision problems which may interfere with his education in the regular classroom has been considered in planning public day school programs. In addition to educational measures, his teachers have been qualified to understand his medical, educational, emotional and vocational problems. The necessary equip-

ment and materials of instruction have been made available. Legislators have provided extra funds to meet supplementary costs of his schooling.

All of this looks forward to the goals expressed in the second article quoted. It is eminently worth while to promote these goals because in realizing them in the citizens of the next generation we are making a valuable contribution to the future of our country. These goals can hardly be reached in the individual who does not have good mental health and, conversely, good mental health usually assures us a good citizen.

## Detecting Visual Disability

It is the duty of the school to identify early those who need extra services. This is not always easy to do. The child with an obvious visual disability stands out in a group of children, but one with a lesser degree of loss of vision is not so easily discovered; yet he may have a greater need of help. Careful follow-up of those referred from vision screening, with complete evaluation of each, can make the difference between serving all who have a need or only the most obvious cases.

\* Presented at the conference of the New York State Federation, Council for Exceptional Children, Albany, N. Y., November 4, 1960.

Mental health has been defined as the ability to see and deal with oneself in the world in a healthful way. How does an individual obtain good mental health? Certainly one means is by developing a self-concept that gives a feeling of adequacy to the individual. This entails recognizing one's own strengths and weaknesses. Building on strengths wherever possible, accepting limitations in a realistic and practical way, are the foundations.

Children develop a self-concept from the actions and attitudes of those around them—especially from the persons who are important to them. With this in mind the teacher needs to be cognizant of her role in helping the child toward self-esteem, self-reliance, and self-acceptance. The special teacher is in a particularly strategic position here. Usually working closely with a limited number of children, she has the opportunity to know them, their families, and all the professional workers who may be involved in their education. If well-qualified, her background of preparation should make it possible for her to understand the medical and educational aspects of the vision problem, as well as the resources of school and community to which she can turn.

#### **Working with Parents**

To know the child one must consider the many aspects of his environment; primarily, of course, one must know the home. So often the special teacher is the only link between home and school. Relatively few communities have school social workers and few of these understand vision problems well. It is usually the role of the school nurse to counsel children and parents in matters of health, including

the social, emotional and physical aspects. Nurses and special teachers need to work together in interpreting health and educational needs.

Since the child is deeply affected, even limited, by what the home has done or is doing to him, a true understanding of his problems involves working with parents. It is not surprising that parents of children with vision problems may in their concern become overly protective or, on the other hand, rejecting.

It is well first to discover the basic attitudes of the parents and then counsel with them insofar as one is competent to do so. For example, the qualified special teacher is able to explain many aspects of eye problems bearing on education, such as those resulting from cataracts or hyperopia. Thus she can implement information which the eye physician may not have had time to impart completely. Such a teacher, of course, knows when to refer to the ophthalmologist.

#### **Visual Limitations**

Probably most difficult for parents to recognize—particularly those who have good vision—are the limitations of partial vision. Not realizing how much or how little a partially seeing child sees may cause parents to be overly lenient on the one hand or impatient on the other. Here again the competent teacher's explanation of visual limitations can bring more understanding.

Parents and many others in the child's immediate circle may become so involved with the vision problems that they ignore other developmental factors. Bringing all factors into balance, neither ignoring nor over-emphasizing the visual ones, is essen-

tial. This approach helps the child to develop a well-rounded self-concept.

Parents and teacher can observe the child for any behavior symptomatic of emotional problems. Their patience, understanding, and consistency in dealing with such difficulties will be most effective because these persons are the ones toward whom the child most often inclines. A recent poll of young persons indicated that 62 per cent felt their greatest problem to be lack of parental care and guidance. A teacher who helps parents in their relations with children and youth is performing an important service.

Knowing the child involves obtaining information from medical, psychological and health services, regular classroom teachers, and classmates. The medical orientation to special education programs has been close over the years so that these findings are usually available and specific. Their educational interpretation remains the responsibility of the special teacher. Clear, precise information from psychological testing is not always easy to obtain. Whether the tests are administered individually by a psychologist or are self-administered neither type of testing has completely taken into consideration the limitations to the development of concepts which reduced vision entails. However, the judicious use of information gained through various kinds of tests can supplement or reinforce that gained through conferences and/or observation. The health picture obtained through health services provides clues for both parents and teacher. The amount of energy a child has to participate in both class and play activities is frequently closely related to his general health.

#### Attitude of Regular Teacher

In her frequent contacts the special teacher is able to ascertain attitudes of the regular teacher toward pupils with vision problems. If these attitudes are not accepting, for whatever reason, they in all likelihood will be "caught" by classmates and certainly felt by the child with the disability. Guiding the regular teacher toward understanding a handicap and gaining insight into her own attitudes toward the child who has it will do much to bring about a classroom environment in which support, participation, and fairness are present for all its members.

Having studied many of the segments of the child's environment the special teacher considers the evidences of development which the child displays. These, measured against a thorough knowledge of child growth and development, give direction to her efforts in working with others concerned with the welfare of the child as well as directly with the child. The combined knowledge of child development, psychology and eye hygiene is another means of keeping the disability in proper focus. For example, the teacher who understands the desire of adolescents to conform to peer group standards and patterns knows that any condition or situation which causes a teenager to differ from his fellows may be the source of a problem. It is important to remember that this source may be any difference, not particularly vision. The individual's adaptation to a disability may vary to the extent that what may be a problem to one is not necessarily a problem to another with the same potential for difficulty.

Looking to the future the special

teacher's accumulation of knowledge and understanding of the child today and his potential provides the needed background to assist in planning with vocational counselors and the rehabilitation services. By their joint efforts a future citizen competent to take his place as a participating and contributing member of the community is insured. Then the goals toward which many have been working will have been achieved. The special teacher is a key person in this effort.

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## Connecticut Workshop in Vision

A WORKSHOP in Vision was held from June 27 through July 8 at Southern Connecticut State College in New Haven.

Sponsored by the college, the National and Connecticut Societies for the Prevention of Blindness, it was planned by President Hilton C. Buley of the college, Dr. Burton Blatt, director of special education, and NSPB staff members.

The program was geared to senior and graduate students preparing for teaching, to nurses, guidance counselors, and school social workers, with these principal objectives:

To increase an awareness of eye health among teachers, alerting them to vision problems and the related educational implications.

To inform nurses and teachers of need for annual vision screening, the methods and educational implications.

To assist guidance counselors and school social workers in the recognition of eye problems, the vocational and rehabilitational aspects and community resources.

To assist all participants toward a knowledge of a complete and sound school eye health and safety program.

The two week course included lectures and discussions on anatomy of the eye; physiology and growth of vision; eye problems of children and adults; preschool and school age vision screening; eye safety and health education; visual environment; emotional adjustment and counseling of the visually handicapped; and identification, educational and vocational planning for the partially seeing child.

### Panel Discussions

Of particular interest were three panel discussions with participants from the Connecticut State Departments of Health and Education, and the Board of Education for the Blind; the Eye Section of the Connecticut State Medical Society; Cerebral Palsy Center; New Haven Visiting Nurses' Association; Westport Department of Health; Junior League; Lions Clubs and the three sponsoring organizations. The topics included "Cooperative Community Activities with Voluntary Agencies and Volunteers"; "Children's Eye Health: Responsibility of Professional Workers"; and "Utilizing Community Resources in the Prevention and Correction of Vision Problems."

Mrs. Ruby Hopkins, field service director of the National Society, co-ordinated the workshop with the aid of Helen Gibbons, consultant in education, and Mrs. Florence Cunningham, nurse consultant. Dr. John W. Ferree, NSPB executive director, was one of the speakers. Guest lecturers included Dr. Franklin M. Foote, Connecticut commissioner of health; Dr. Clement C. Clarke, past president of the Eye Section, Connecticut State

Medical Society; Dr. Robert W. McCalmont, director of health, Westport; Dr. Francis P. Guida and Dr. Andrew Wong, ophthalmologists who are members of the Professional Advisory Committee of the Connecticut Society for the Prevention of Blindness. James E. O'Neil, NSPB director of industrial service, discussed the importance of protective eyewear for all students in vocational shops, industrial arts classes and chemistry laboratories.

#### **Report on Research**

Dr. Edwin B. Dunphy, professor of ophthalmology at Harvard University Medical School and chief of the department of ophthalmology, Massachusetts Eye and Ear Infirmary was a featured speaker on the topic "Research Findings in the Field of Vision." He reported that plastics offer hope in eye disease, describing experimental work with rabbits and monkeys in which a clear plastic disc has been used to replace an opaque cornea. Also described was an experimental cataract operation in which a plastic lens is used to replace the natural lens. Dr. Dunphy emphasized the need for early case-finding in glaucoma which affects an estimated one million people who are not aware of it.

Thirty-five students registered for the workshop, 16 of whom were nurses, 17 teachers, one a librarian, and one a school principal. It was gratifying to note the emphasis placed on eye health of school children as indicated by the number of students who received scholarships for the course. There were 14 in all: three nurses received scholarships from the Board of Education of Southington, two nurses from the Waterbury Medi-

cal Society; and nine teachers and nurses were able to enroll through grants made by Lions Clubs. Three college credits were given. Student evaluations indicated that the workshop was most worth while and should be repeated.

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#### **MRS. CUNNINGHAM RESIGNS**

Mrs. Florence Cunningham, R.N. who joined the staff of the National Society as nurse consultant in 1955, has resigned to accept the position of school nurse-teacher in Yonkers, N.Y.

During her years with NSPB Mrs. Cunningham has performed outstanding service in advancing relationships with the nursing profession; in promoting preschool vision screening and training personnel for this program; and in preparing educational materials for her special field.

Her conscientious and competent service as a staff member and her warm and friendly personality will be greatly missed.

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#### **DELTA GAMMA SCHOLARSHIPS**

The Delta Gamma Foundation again offers scholarships for training of orthoptic technicians and teachers and consultants for visually handicapped children. Applications for these scholarships must be received no later than April 1, 1961. Information may be obtained by writing to the Delta Gamma central office, 1820 Northwest Boulevard, Columbus 12, Ohio.

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#### **EYE CANCER**

The American Cancer Society estimates that this year 265,000 people will die of cancer in the United States. Of these 350—200 men and 150 women—will be the victims of eye cancer.

## NSPB Annual Membership Meeting

A MEETING of the Board of Directors of the National Society for the Prevention of Blindness was held on December 8 in the Barbizon-Plaza Hotel, New York City. The order of business included reports by Dr. John W. Ferree, executive director, and the chairmen of four NSPB advisory committees; Dr. Willis S. Knighton, *glaucoma*; Dr. Frank Newell, *committees*; Mrs. Dorothy Bryan, *education of the partially seeing*; and Lester Brion, *budget for 1961*.

Outlining the most significant developments in the Society's program during 1960, Dr. Ferree spoke of the comprehensive management survey made by Winfield I. McNeill, who contributed his services. Mr. McNeill, an expert in the management field, retired as vice-president and controller of General Aniline and Film Corporation.

As a result of his valuable study the Society's office procedures have been updated, controls and accounting methods improved, and personnel policies standardized. Deep appreciation was expressed to Mr. McNeill, a new member of the Board of Directors, for his outstanding contribution.

During 1960 relationships with the Society's state and local constituencies were strengthened. The industrial eye safety incentive program—the Wise Owl Club—is now international with independent clubs established in Canada and Great Britain. The NSPB film "It's Up to You," which stresses eye protection in industry, has been produced in Spanish and French. The Junior Wise Owl Club, recently organized, will do for school youngsters

what the senior organization has done for their working fathers and mothers.

Public information efforts have been increased, Dr. Ferree emphasized, and this means that more people know better how to protect their own vision and how they can help prevent blindness in others.

Clinical, laboratory and operational research are basic to the Society's program. Grants have been provided in 1960 for investigation of such problems as preservation of corneas, treatment of diabetic retinitis, basic factors in the cause of glaucoma, etiology of uveitis, underlying cause of cataracts. Operational research, which serves as the basis for planning the Society's program, has included updating of estimates of the causes of blindness and visual impairment, revision of the standard classification of causes of blindness; also collection of statistical data on the incidence of eye trouble among preschool children and of glaucoma among adults.

Measures developed during the year for fund raising are expected to produce heartening results in public financial support.

A major task of the National Society in 1961, Dr. Ferree believes, will be the development of policies governing national-state society relationships—policies that will provide opportunity for the healthy growth of a unified effort to prevent blindness throughout the country.

### New Board Members

Following this session the Annual Membership Meeting of the Society was held. New members elected to serve on the Board of Directors were:

Mrs. Robert Baynard of St. Petersburg, Florida; president of the Florida Society for the Prevention of Blindness and a well-known civic leader.

Judge Henry Friendly of New York City; appointed to the U.S. Court of Appeals in 1960.

Edwin E. Garrett, M.D. of Houston, Texas; assistant professor of clinical ophthalmology, Baylor University Medical School; chairman of the professional advisory committee, Texas Society for the Prevention of Blindness.

Edward V. Gross of New York City; lawyer; member of the firm of Watters and Donovan.

Robert P. Kelsey of Boston, Mass.; vice-president, John Hancock Mutual Life Insurance Co.; vice-chairman, Massachusetts Society for the Prevention of Blindness.

Leslie W. Knott, M.D. of Washington, D. C.; chief, division of chronic diseases, U. S. Public Health Service, Department of Health, Education, and Welfare.

Winfield I. McNeill of West Hartford, Conn.; former vice-president and controller, General Aniline and Film Corporation.

Robert N. Shaffer, M.D. of San Francisco, Calif.; associate clinical professor of ophthalmology, University of California Medical School.

Homer E. Smith, M.D. of Salt Lake City, Utah; ophthalmologist; chairman, professional advisory committee; Utah Society for the Prevention of Blindness.

Joseph S. Stein of Chicago, Ill.; former president of Lucien Lelong; member, board of directors, Illinois Society for the Prevention of Blindness.

George M. Wheatley, M.D. of New York City; vice-president, Metropolitan Life Insurance Co.

John Wilkie of Poughkeepsie, N.Y.; vice-chairman, board of directors and chief financial officer, Central Gas & Electric Corporation; treasurer and trustee, Vassar College; director, National Industrial Conference Board.

#### **Address by Dr. Perkins**

The highlight of the membership meeting was an address by Dr. James E. Perkins, president of the National Health Council and managing director of the National Tuberculosis Association, on "Recent Developments in the Organization of Health Activities." It appears in this issue.

A demonstration of the value of industrial eye safety programs was given by George J. Ruoff, safety director of Central Hudson Gas and Electric Corporation, Poughkeepsie, N.Y., and Lewis O. Tompkins, a repairman at Central Hudson, whose eyes have been saved three times by safety spectacles when on-the-job accidents occurred. Mr. Tompkins is a member of the Wise Owl Club sponsored nationally by NSPB. He told how the good safety habits he had acquired in his long service with the company had paid off, and what this had meant to himself and family.

#### **New Film on Amblyopia**

At the conclusion of the meeting a new film on amblyopia titled "Cross Roads at 4" was shown. Designed particularly to alert parents to this condition in children in which dimness of vision occurs without apparent eye disease, the film emphasizes the importance of early eye examinations and the needless loss of sight which results from neglect.

The film was produced jointly by the Utah Society for the Prevention of Blindness and the National Society with the financial assistance of the David Warfield Fund of the New York Community Trust, and contributions from ophthalmologists and opticians in Utah.

## Award to Dallas Delta Gamma

FOR its outstanding accomplishment in the vision screening of preschool children the Dallas Chapter of Delta Gamma has won second place in the Club of the Year contest conducted annually by the *Dallas Times Herald*. The award, a plaque and \$75.00, is in recognition of service to Dallas County at large.

Under the sponsorship of the National Society the group began this screening program in 1954. It has continued as a cooperative project with the Texas Society for the Prevention of Blindness. During the 1959-1960 season 1,600 children between age three and six were screened, and of these 52 were referred for complete eye examinations and treatment as needed. Ninety-five per cent of the referrals were correct. Thirty Delta Gamma volunteers devoted 540 hours at 19 schools and three public health clinics.

Mrs. Gordon Wilbur, chairman of the project and secretary of the Dallas Branch of the Texas Society, reports that vision tests have been conducted in 23 schools this fall and the clinic screening will be continued.

"It is impossible," Mrs. Wilbur said recently, "to judge the immediate benefit received by the community from this vision screening project, but we feel that the discovery and correction of just one sight problem in a preschool child per year makes the program invaluable to us and to Dallas.

"The 540 volunteer hours spent by Delta Gamma members during 1959-60 represents much more than an award winning project. Best of all is

the fact that eye defects of 52 children were discovered and referred for correction."

The Dallas Chapter submitted in the *Times Herald* competition an excellent presentation of its project—a large book graphically featuring the need for vision screening, the method used, and statistical information on the results of the work. Beautifully illustrated, the book is worthy of display in prevention of blindness exhibits throughout the country—a truly professional accomplishment devised by a volunteer group with skill and resourcefulness.

Congratulating Mrs. Wilbur on the results of this program, Dr. John W. Ferree, executive director of the National Society, emphasized the excellent percentage of follow-up. "This is perhaps the most important and also the most difficult part," he said, "and I wish that such a fine record could be achieved throughout the country.

"Your Delta Gamma group in Dallas has turned in a splendid performance. The outstanding features have been the efficiency of organization, effectiveness of training and faithfulness of your membership in carrying out these screenings."

The Dallas volunteers have consistently increased their coverage of the preschool children since the first year, 1954-1955. A total of 8,219 have been screened, and 332 referred for complete eye examinations. Ninety per cent of the total referrals were correct. More than 2,900 hours of valuable volunteer time were given to accomplish this record.

## Junior Wise Owls Organized

SOME 12 years ago the National Society assumed sponsorship of the Wise Owl Club of America with the objective of furthering protection of vision in industry. The club now has 2,783 plant chapters and 20,487 members, each of whom has saved his or her vision from accidental injury by wearing proper eye protection. The eyes saved in the accidents recorded by the chapters number 25,609.

Last month the Society announced the arrival of a little brother organization called the Junior Wise Owl Club of America, whose objective is the encouragement of eye safety among pre-teen and teen-age youngsters. Similar to the parent group, it will accept as members only those boys and girls who have saved their vision because they were wearing eye protection (safety lenses) in sight-threatening accidents.

Membership in the Junior Wise Owls will be granted to any pre-school, grammar or high-school age boy or girl whose sight is saved from injury or destruction through the use of spectacles with safety lenses, either with or without correction, or other recognized or approved eye protection devices such as goggles or face shields.

Eligibility will be determined from information submitted to the National Society by the ophthalmologist, optometrist or optician who prescribed and/or made the safety spectacles worn by the youngster at the time of the accident. In cases where safety eyewear other than with lenses ground to individual prescription is

involved, a statement from a school administrator, teacher, parent or other responsible person would be acceptable.

Formal organization of the Junior Wise Owl Club was observed last month with the induction of two charter members, Robert K. Chapin of Mahwah, N.J. and Edward L. Sinclair of Greenwich, Conn. The sight of both these 13-year-olds was saved because their fathers had provided them with safety lenses to wear routinely. Both parents have learned the value of eye protection through experience in industry.

Robert, son of Henry Chapin, a senior metallurgist at American Brake Shoe Company's Mahwah research center, escaped eye injury when a fragment of rock cracked the safety lens of his glasses.

Edward Sinclair was leaving Sunday School when he accidentally toppled down a flight of stairs. His face scraped the stone and metal surfaces and his glasses were badly damaged, but thanks to the safety lenses he had no eye injury. Edward's father is manager of Socony-Mobil Oil Company's engineering department in New York City.

### EYE SAFETY OFF THE JOB

An employee of Celanese Corporation, Clarkwood, Texas carries his good eye safety habits home with him. While he was using a gasoline-powered lawn edger it struck some loose gravel which sprayed violently over his upper body. The left lens of his safety glasses was broken, but there was no eye injury.

## NOTES AND COMMENT

### • Sight-Saving Month 1960

Sight-Saving Month, the National Society's annual campaign to alert American citizens to the value of eye care, was again observed in September.

The Society was fortunate in securing the valuable help of Robert Kintner, president of the National Broadcasting Company, as national publicity chairman. As in the past the observance was endorsed by the Advertising Council and was given prominent space in the Council's September bulletin.

The most intense concentration was on mass media—radio, television, newspapers, general magazines, house organs, and business publications. Directors of each of the state prevention of blindness societies were asked to place the publicity locally, and this was done with great success.

A number of celebrities generously cooperated in making recordings which were sent to 3,000 radio stations. Featured on these recordings were Arlene Francis, Celeste Holm, Faye Emerson, Anne Bancroft, Jack Paar, Hugh Downs, Bill Cullen, Ryne Duren, and Red Barber.

Dr. John W. Ferree, NSPB executive director, recorded a special message which was heard throughout the country.

To date reports have been received from 35 states showing that spot announcements with a commercial time value of \$92,369.99 were used. Unsolicited assurance of year-round use of the recordings has been received from many of these stations.

Each state society was sent a television kit consisting of sound-film spots, and a set of slides with a script and suggested announcement. Included was a signature showing the local society's name and address. Reports from other states that carried the national name and address show that an additional 1,052 spots with a commercial value of \$16,205.40 were used.

Material was sent to newspapers with over 50,000 circulation. Clippings indicate that this was circulated to approximately eight and a half million persons. A syndicated cartoon, "Landmarks in the History of Eye Care" was mailed to weeklies, and reports so far indicate that it was used in 213 newspapers with a circulation of more than 750,000. This is not a dated feature and it will be used throughout the year.

Special promotion was done through the 2,783 Wise Owl Clubs, which are organized in the interest of eye safety in industry under national sponsorship of NSPB.

Reports from the field indicate that the Sight-Saving Month materials this year were more effective and more widely used than ever before.

### • AAOO Program

During the 65th Annual Meeting of the American Academy of Ophthalmology and Otolaryngology, held October 9-14 in Chicago, the National Society sponsored several conferences and made important contacts with many of the 6,000 physician-delegates. Dr. John W. Ferree, NSPB executive director, and several of the

staff members attended the six-day conference.

The NSPB Committee on Glaucoma held a discussion meeting in which 101 ophthalmologists participated, the largest attendance to date at this annual event. With Dr. Willis S. Knighton, chairman of the committee, presiding the discussion dealt with diagnosis and clinical management of glaucoma and recent advances in research relating to the disease.

In another session the Glaucoma Committee discussed various ways and means of broadening its educational program. Among the measures approved were: preparation of a manual on glaucoma detection programs; encouragement of standardized reporting of results in such projects; revision of the NSPB film "Glaucoma—What the General Practitioner Should Know"; and preparation of teaching material to supplement the film when used with medical students.

During the week a breakfast meeting of chairman of professional advisory committees of State Prevention of Blindness Societies was held. Seventeen of the physicians who are helping to guide many of the activities of these NSPB divisions were in attendance. Various program, policy and fund raising problems of the local groups were discussed.

This year for the first time a course in Educational Management of the Partially Seeing Child was included in the Instruction Section of the Academy's program. Upon invitation the course was given by two members of the National Society's staff: Helen Gibbons, M.A., consultant in education; and Florence Cunningham,

R.N., nurse consultant. Content of the course included causes of defective vision among children; methods of identifying those needing special educational help; vision screening and follow-up; good visual environment; and the preparation of teachers for this special field.

The value of community interest, including both professional and lay groups, was strongly emphasized, since in many areas partially seeing children are overlooked and receive little or no additional aid in their school work.

A new exhibit featuring the National Society's overall program received many favorable comments from AAOO delegates.

#### • **Academy of Pediatrics**

In the week following the AAOO an exhibit on eye health of young children was presented at the Annual Meeting of the American Academy of Pediatrics in Chicago. Mrs. Virginia S. Boyce, NSPB assistant director, who was in attendance reports that conferences were held at the Society's booth with some 500 pediatricians. Many of them are in key teaching positions and expressed the wish to include in their programs the subject matter featured in the exhibit—methods of detecting signs of eye trouble in children three to six years of age, and facts bearing on the importance of early referral to a specialist.

#### • **Glaucoma in Hawaii**

The Hawaii Bureau of Sight Conservation and Work with the Blind is sponsoring a community-wide glaucoma detection program. Approval for this project was obtained from

the Hawaii Eye, Ear, Nose & Throat Society and the Honolulu County Medical Society.

The first phase, a pilot study glaucoma examination, was held on June 6, 1959 at the Holy Nativity-Youth Center in Honolulu. Co-sponsors with the Bureau were the Hawaii Health Department and the Kokohead Lions Club.

Adults 35 years of age and older were invited to take the test and among those responding were the Lions and their wives, relatives and friends; Kalani High Parents-Teachers Association; Star of the Sea Parents-Teachers Guild; members of the Church of the Holy Nativity; and persons who had previously visited an exhibit on glaucoma sponsored by the Bureau.

The screening was held from 10:00 A.M. to 2:00 P.M. and was staffed by five ophthalmologists, 14 Bureau of Sight Conservation workers and six Kokohead Lions. It included visual acuity test, ophthalmoscope examination, and tonometry test. Provocative (water) tests were given to questionable cases. All participants were invited to see a film on glaucoma which was shown continuously.

Of the 71 persons over age 40 who were screened one was diagnosed as having glaucoma.

Another glaucoma clinic was held in February 1960 in which 326 persons of the same age group were tested. A diagnosis of glaucoma was confirmed in seven of these cases.

Mary L. Noonan, director of the Bureau, reports that although these studies are not concluded it appears that the results will be very close to the national figure of two per cent undetected glaucoma.

#### • Optical Aid Clinic

The Kansas Optical Aid Clinic was officially launched last August in the Sedgwick County Clinic and Hospital in Wichita through the participation and cooperation of the Sedgwick County Social Welfare Board, the ophthalmologists of the Kansas Medical Society and the Division of Services for the Blind.

*The Observer* reports that patients must be referred to the clinic by ophthalmologists, vocational rehabilitation counselors or home teachers for the blind; and an eye examination is required before acceptance. Those able to pay for the examination will be charged a fee of \$10, but the service will not be denied anyone because of financial need.

No medical eye examinations will be given at the clinic, which is set up, for the sole purpose of determining the possibility of improvement of subnormal vision by the use of special aids.

The clinic will be staffed by ophthalmologists of the Wichita area on a volunteer basis, and an optical aid counselor furnished by the Sedgwick County Social Welfare Board. Visits at any time and use of the facilities by all ophthalmologists of Kansas is anticipated and encouraged.

#### • Hospital Infections

Hospital infections can be controlled by close cooperation between physicians and bacteriologists, Dr. Henry F. Allen of Boston reported in a paper presented before the October meeting of the American Academy of Ophthalmology and Otolaryngology in Chicago. His paper, "Bacteriology in Relation to Hospital Infections,"

was given as part of a symposium on "Epidemiology and Control of Hospital Infections." Many infection-producing organisms which previously have been controlled by antibiotics are now developing strains resistant to treatment with drugs. Physicians have been striving to find new means of solving these problems related to control.

Postoperative infections are no longer inevitable, Dr. Allen stressed, and a surgeon working with a clinically oriented bacteriologist can establish the cause of infections, trace their spread, select and guide the treatment, and set up effective measures for prevention.

Three main sources of operative infection are bacteria harbored by the members of the operating team, usually bacteria of the respiratory tract; bacteria harbored by the patient, especially those of the conjunctival sac and the external ear canal; and bacteria capable of producing inflammation present in some solutions recommended for their supposed sterilizing properties.

Dr. Allen emphasized that these sources can be detected preoperatively by laboratory procedures and can be controlled before or during surgery by existing techniques. This problem is not new, but it has some new aspects which the medical profession is making a maximum effort to correct.

#### • **TV Eye Marker**

A device called a "television eye marker," believed the first to record precisely where the eyes are focused, was described at the 13th International Congress on Occupational Health held in New York City.

Developed at the Defense Research Medical Laboratories in Toronto by Drs. Norman H. Mackworth and Edward Llewellyn-Thomas, the eye-camera device appears promising for the study of such visual defects as scotoma, amblyopia and nystagmus and for assessing the efficacy of treatment. It is also being used for studying the focusing patterns of automobile drivers and students in an effort to determine how their visual alertness might be improved.

The television eye marker consists of a helmet fitted with an 8-mm. movie camera that records the general field of vision encompassed by the movement of the subject's head. A periscope suspended in front of his left eye reflects the position of the cornea, and thus the line of sight, in the form of a bright spot of light superimposed on the photographic image of the scene. In this way the device records the exact direction of eye movements and not just the direction in which the head is pointed.

The device might possibly be applied for improving the focusing patterns of children with strabismus by showing an interesting motion picture that would stop running when the incorrect portion of the retina was being used.

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#### 1961 AAOO MEETING

The American Academy of Ophthalmology and Otolaryngology will hold its next annual meeting at the Palmer House, Chicago, October 9-14, 1961.

A course in "Educational Management of Partially Seeing Children," given for the first time at the 1960 AAOO meeting, will be repeated under the direction of Helen Gibbons, NSPB consultant in education.

## MRS. BOYCE HONORED FOR SERVICE TO DELTA GAMMA

Mrs. Virginia S. Boyce, assistant director of the National Society, has been selected for the honor of serving as patroness of the new Gamma Omega Chapter of Delta Gamma which was installed at St. Lawrence University, Canton, N. Y., December 1-3.

Since 1946 Mrs. Boyce has been chairman of the professional advisory committee of Delta Gamma's national project, Sight Conservation and Aid to the Blind. Her initiation in this international fraternity for women is in recognition of this long term of valuable service. Delta Gamma has 88 collegiate chapters and 250 alumnae groups with a total membership of 50,000.

The Council of Delta Gamma unanimously passed the following resolution at the fraternity's recent convention in Estes Park, Colorado:

WHEREAS, the services of Mrs. Virginia Smith Boyce, assistant director of the National Society for the Prevention of Blindness, to the Delta Gamma Foundation and the Committee on Sight Conservation and Aid to the Blind have been so outstanding as she has served as chairman of the Professional Advisory Committee,

RESOLVED, that the sincere appreciation of the Delta Gamma Fraternity be expressed for her devoted and continuing interest.

### COMMITTEE ON RLF

Dr. Homer E. Smith of Salt Lake City, chairman of the professional advisory committee of the Utah Society for the Prevention of Blindness, and a member of the NSPB

Board of Directors, reports that he is organizing a Committee on Retro-ental Fibroplasia. He has asked Dr. Dean Spear of Salt Lake City to serve as chairman and to select one committee member from each of the major hospitals in the State of Utah. The objective is to alert the medical profession, the hospitals and attending nurses to the importance of administering oxygen to premature infants with a great deal of care, following the recommendations of the American Academy of Pediatrics (published in *Sight-Saving Review*, Fall 1956).

### SUMMER COURSES

According to information received to date the following colleges and universities will offer courses for teachers and supervisors of partially seeing children during the 1961 summer session.

#### Basic Courses

George Peabody College for Teachers, Nashville, Tenn.

Illinois State Normal University, Normal.  
Los Angeles State College, Los Angeles, Calif.

San Francisco State College, San Francisco, Calif.

Syracuse University, Syracuse, N. Y.

University of Minnesota, Minneapolis, Minn.

University of Pittsburgh, Pittsburgh, Pa.  
Wayne State University, Detroit, Mich.

#### Advanced Workshops

Illinois State Normal University, Normal, Ill. (*two weeks*)

George Peabody College for Teachers, Nashville, Tenn. (*two weeks*)

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**CHICAGO STUDIES PROGRAM  
FOR THE PARTIALLY SEEING**

Last semester the Chicago school system experimented with an itinerant teacher program for the partially seeing to supplement a continuing resource room program, reports Frances A. Mullen, assistant superintendent of schools.

A selection was made of 60 partially seeing pupils who appeared to have the best prognosis for success in the regular grades, provided they received help from an itinerant teacher. The program was started with a staff of seven teachers, while 39 other teachers continued in a resource room program.

The progress of the pupils was studied and reported upon monthly. The teachers hope to refine their criteria for determining which children are best served by an itinerant program and which children by a resource room program. The itinerant plan has been adopted in a number of cities.

**PAPER CLIP EYE INJURY  
UPHELD AS OFFICE ROUTINE**

An office boy who relieves the boredom of waiting for messenger duty by flipping paper clips out of the window with a rubber band is acting within the normal bounds of his job, the New York State Court of Appeals ruled on April 28, 1960. According to a story in the *New York Times* appearing the next day, a Staten Island boy will be granted a workmen's compensation award of \$228.64 for injuries suffered when one of the clips ricocheted and caught him in the eye. The accident happened in 1955, and since then the boy's employers have tried to set aside the award by the Workmen's Compensation Board. The Appellate Division decided that paper clips and rubber bands were part of the standard equipment of a messenger boy, and that this one was not skylarking. The Court of Appeals agreed. Neither court commented on the dangers to the eyes in such a slingshot.

## AROUND THE WORLD

### GREAT BRITAIN

**UNICEF versus Trachoma.** The United Nations Children's Fund of UNICEF began giving aid to anti-trachoma campaigns in 1952 with the technical advice and cooperation of WHO. Since then some seven and a half million people, of whom more than five million are children, in eleven countries have been treated. However, considering the global scope of the problem, the accomplishments so far are only a small beginning reaching less than two per cent of those afflicted.

*The New Beacon* reports that the recent studies conducted in Britain and China may well prove a turning point in the development of effective immunization agents and lead to the development of preventive drugs for use on a mass scale. Trachoma virus strikes one out of every seven of the world's population. It is especially prevalent in the dry sandy areas of Africa, the Mediterranean, the Indian subcontinent and parts of East Asia.

In some parts of the world trachoma has been checked or has disappeared. This has usually been a very slow process occurring under favorable climatic conditions in certain European and North American countries.

Since the first UNICEF-aided pilot project was started in Morocco the Fund has allocated more than \$2,000,000 for the antibiotics, sulphur and transport needed in control work. Campaigns are in progress in eleven countries which have requested UNICEF aid: Algeria, Morocco, Tunisia, India, Indonesia, Taiwan,

Ethiopia, Turkey, Egypt, Spain, and Yugoslavia.

Antibiotics are helping to combat some age-old superstitions among millions of people in the underdeveloped lands. A Berber woman walked 25 miles barefoot over rough road with her trachomatous baby on her back to ask for a tube of ointment at a UNICEF-aided clinic. She told of the other cures she had tried: saliva, gall of a freshly killed vulture, eye cosmetic. The ointment saved the child's sight.

### GREECE

**Uveal Syndrome Gives Early Glaucoma Diagnosis.** New characteristics of the uveal syndrome were reported to the first Congress of the European Ophthalmological Society in Athens by Dr. Roberto Sampaolesi of University Hospital, Buenos Aires, reports *Scope Weekly*.

According to Dr. Sampaolesi the earliest symptom is an increase in the permeability of the blood-aqueous barrier as measured by the Amsler's and Huber's fluorescein permeability test. The next symptom is a marked scattering of pigment caused by atrophy of the iris tissue and deposition in the lower part of the chamber angle, thus forming waves that extend beyond Schwalbe's ring. Fluorescein permeability is markedly increased from blood to aqueous humor in aphakic eyes with pseudoexfoliation. These early changes are followed by the classic signs of capsular glaucoma.

Of 219 eyes examined by the author 60 per cent had capsular glaucoma by

the classic signs and 40 per cent by the early signs. In slit-lamp examinations of 1,530 outpatients between 60 and 92 years of age at the University Eye Clinic, Athens, a 10 per cent incidence of capsular exfoliation was seen according to Dr. Themistocles Joannides, professor of ophthalmology, University of Athens. This disease was most frequent in patients with opacity of the lens and in diabetics. A concomitant glaucoma was noted in 40 per cent, and in cases of unilateral exfoliation with glaucoma the latter was always localized in the eye showing exfoliation. However, three cases of unilateral exfoliation and bilateral glaucoma were seen.

Slit-lamp examinations of several hundred patients with known glaucoma revealed capsular exfoliation in 30 per cent. From these findings Dr. Sampaolesi suggests a close relationship between exfoliation and glaucoma and believes it plausible that they represent parallel processes provoked by vascular disturbances in the uvea. Coauthors were Dr. N. Katsourakis and Dr. Panayotis Velissaropoulos of Athens.

#### GUATEMALA

**Control of Onchocerciasis.** At the 13th World Health Assembly held in Geneva, Switzerland in May 1960, the Guatemalan delegate suggested that one or more permanent centers for research on onchocerciasis be established in the Americas. The disease is of great social and economic importance in Guatemala not only because of its incapacitating effects, but also because it has discouraged settlement in potentially fertile districts. Guatemalan health authorities

have found it possible to reduce the prevalence of blindness among affected persons by the removal of onchocercal nodules, but they have not been able to reduce the incidence of infection in endemic zones or prevent the spread of the disease to new areas.

Experience in Africa, as well as the pilot projects in Guatemala and Mexico, has shown that while it is possible to achieve control or even eradication of the vectors, this must be supplemented by the mass treatment of cases. Guatemala cannot afford to undertake such a program alone and hopes for more assistance from UNICEF and WHO.

#### JERUSALEM

**New Ophthalmic Center.** The Ophthalmic Hospital of the Order of St. John was officially opened in October by King Hussein of Jordan, reports the *British Medical Journal*. Containing 70 beds and a large outpatient department, the hospital incorporates a research institute and a training school. Sir Stewart Duke-Elder, the Hospitaller of the Order, was instrumental in the completion of the new building.

#### SOUTH AFRICA

**Eyes Willed to Natives.** Nearly 300 white South Africans have willed their eyes to the St. John Ophthalmic Hospital at Baragwanath, near Johannesburg, to give sight to blind natives.

These donors are the only hope for the colored blind. Natives themselves refuse to will their eyes to their fellow men because of their belief that they must be able to see where they are going in the next world.

## CURRENT ARTICLES

**The Coefficient of Scleral Rigidity in Normal and Glaucomatous Eyes.** S. M. Drance. *A.M.A. Archives of Ophthalmology*, Vol. 63, p. 668. April 1960.

The scleral rigidity of nonglaucomatous and glaucomatous eyes was studied as well as the influence upon scleral rigidity of such factors as age, sex, refractive error, provocative tests, and miotic treatment of glaucoma.

The mean scleral rigidity of 1,011 normal eyes was found to be 0.0217 and confirms the values found by Friedenwald. There was no significant difference between the scleral rigidity of the two sexes and no relationship to age was shown. The main factor influencing the coefficient of scleral rigidity is the refractive error. High hypermetropes tend to have a high scleral rigidity, whereas high myopes tend to have a low scleral rigidity. A series of untreated glaucomatous eyes was also shown to have scleral rigidities varying according to the refractive state. It was somewhat lower than in nonglaucomatous eyes.

Miotics, including the new powerful cholinesterase inhibitors, produced a decrease in scleral rigidity in approximately 25 per cent of all glaucomatous patients. This may give a false sense of security as the intraocular pressure is higher than that recorded by the Schiøtz tonometer.

During the water test the scleral rigidity falls in a substantial number of eyes giving a negative test as measured with the ordinary impression tonometer. A higher incidence of positive results is found with the applanation tonometer.

**Glaucoma of Myopic Individuals and Its Operation.** G. Lugossy. *American Journal of Ophthalmology*, Vol. 49, p. 981. Part I, May 1960.

The possibility of glaucoma should always be considered in the presence of myopia. Dimness in sight due to phakosclerosis frequently gives rise to misinterpretation of the condition and the real cause of poor vision, the glaucoma, remains undiscovered.

Myopia and blurred lenses in a patient constitute a pitfall for the ophthalmologist who is likely to ascribe the deterioration of sight to the two manifest morbid conditions. In the meantime, the unrecognized glaucoma progresses to the stage where its diagnosis may be too late. The four reported cases are evidence of this.

**Results from the Glaucoma Detection Program at the Wisconsin State Medical Society Meeting of 1959.** L. L. Garner. *The Wisconsin Medical Journal*, Vol. 59, p. 241. April 1960.

This project was sponsored by the Wisconsin Committee of the National Society for the Prevention of Blindness. Of 396 adults tested during the three-day period 353 were males, 43 females. In the group were 232 physicians.

Of those tested 97 were between ages 31-40; 95 were 41-50; 106 were 51-60; and 32 were 61-67. An incidence of 1.76 per cent of previously unrecognized glaucoma was found. An additional case that is strongly suspect may bring the percentage to 2.02.

The author, who is clinical instructor in the department of ophthalmology, Marquette University School of

Medicine, was chairman of the professional committee that arranged the screening project. He describes in detail the advance planning, administrative procedure and follow-up.

An important sidelight to this program was the interest shown by the doctors in learning to do tonometry in their practice. The author emphasized the importance of this procedure in all physical examinations on persons over age 40. He reports that a course was offered at Marquette to internists of Milwaukee County. Of 127 canvassed 31 said they would like to have the course given. The actual attendance was 38 per cent. However, much enthusiasm was displayed by the small group who did attend, and the efforts expended in this training were considered worth while.

**Effect of Neptazane on Intra-Ocular Pressure in Relation to Its Systemic Action and Its Clinical Application.** D. A. Campbell. *British Journal of Ophthalmology*. Vol. 44, p. 415. July 1960.

A close similarity exists in the action of two carbonic anhydrase inhibitors, Neptazane and Diamox, on intra-ocular pressure and in their systemic effects. Owing to its slowness of action, Neptazane is less suitable for the rapid reduction of intra-ocular pressure in cases of acute glaucoma. The drug is particularly suitable for long-term therapy because, unlike Diamox, it continues to be effective. It provokes very few unpleasant side-effects.

The most noticeable physiological feature of the action of Neptazane is the close correlation between the fall in the intra-ocular pressure with the fall in the electrolytes and their increased excretion. The osmotic

changes which it causes in the plasma may in fact be greater than those which follow the use of Diamox since the induced diuresis is comparatively less and the excretion of sodium and potassium is higher.

**Results of Surgery in Patients with Tubular Fields Due to Glaucoma.** J. Laval. *A.M.A. Archives of Ophthalmology*, Vol. 63, p. 850. May 1960.

In 15 patients 17 operations were performed for the relief of intraocular tension in eyes with tubular fields of vision limited to 10 degrees at the widest meridian. In not one patient was there a deterioration of vision or of visual field following the operation. Some of the patients who delayed the operation lost a good deal of their visual fields and were saved from blindness only by surgery.

It is advised that an operation be performed for relief of tension in patients with tubular fields due to chronic glaucoma if there is an increase of intraocular tension and the visual field is diminishing.

**The Clinical Application of the Goldmann Applanation Tonometer.** T. A. F. Schmidt. *American Journal of Ophthalmology*, Vol. 49, p. 967. Part I, May 1960.

The outstanding feature of the Goldmann applanation tonometer compared with other types is the great accuracy with which it measures very small areas. In taking measurements with the Schiøtz, McLean or Gradle tonometers the reading of the instrument is significantly affected by the scleral rigidity as well as by the intra-ocular pressure. In the application technique with the Goldmann tonometer the effect of scleral rigidity is

eliminated. The flattened area is very small and therefore the displaced volume is insignificant.

The instrument and the examination technique are described in detail.

#### **How Valid Is a Scleral Tonometer?**

R. E. Hogg and M. Alpern. *American Journal of Ophthalmology*, Vol. 49, p. 1221. Part II, May 1960.

A study was conducted to determine how accurately the scleral tonometer measures the intraocular pressure with respect to the standard corneal instrument which has been in use for over 50 years.

Manometric measurements on 11 pig eyes with corneal (Schiøtz) and scleral (Wolfe) tonometers showed that the latter was much less sensitive and much more variable than the former. Measurements on 86 living human eyes showed that the data from the two instruments are not sufficiently correlated to validate the scleral instrument. The reasons for the discrepancies in the readings of the two instruments are discussed.

#### **Various Laboratory Aspects of Alpha Chymotrypsin.** C. W. Damaskus. *American Journal of Ophthalmology*, Vol. 49, p. 1117. Part II, May 1960.

Alpha chymotrypsin preparation, characterization and stability are discussed. Data are presented in reference to chymotrypsin compatibility with some of the drugs used in cataract surgery.

Rabbit blood was used to demonstrate the action of chymotrypsin inhibitors. The results indicate that rabbit serum contains sufficient trypsin inhibitor to bind approximately 99 per cent of the trypsin activity and

sufficient chymotrypsin inhibitor to combine with approximately 90 per cent of the chymotrypsin activity. The use of a chymotrypsin inhibitor becomes practical in irrigating the anterior and posterior chambers of the eye after lens removal. With this technique there would be complete assurance of no latent chymotrypsin effects on the iris, cornea and other tissues involved.

It is suggested that if serum or blood is present in the anterior or posterior chamber during cataract surgery, chymotrypsin inhibitors may selectively bind alpha chymotrypsin and interfere with zonulolysis.

#### **The Use of Alpha-Chymotrypsin in Cataract Surgery.** R. G. Murray and S. M. Drance. *A.M.A. Archives of Ophthalmology*, Vol. 63, p. 910. June 1960.

The ultimate results in 200 eyes in which cataract extraction was performed in the usual fashion and those in 42 eyes in which the cataract was extracted using alpha chymotrypsin were compared. The percentage of both surgical and postsurgical complications was considerably higher when the enzyme was used. However, in the age group below 60 the number of complications encountered in using the enzyme was significantly less than in the similar age group in which no enzyme was used.

The authors conclude that the enzyme should be reserved for those cases in which one anticipates difficulty in doing an intracapsular procedure. They did not use it in the 20 or younger age group, but disastrous results have been observed in dealing with persons in this group, and it is generally accepted that this procedure

should not be used in congenital cataracts.

The patient should have general anesthesia when the enzyme is used and minor changes in operative technique are indicated. Skill with an erisiphake extraction is almost mandatory if this procedure is employed. The lens should be fixated immediately after the injection of the enzyme.

If complications ensue, such as the loss of vitreous or iris prolapse in an enzyme eye more difficulties are experienced than with similar complications when no enzyme is used.

**Unfavorable Effects of Alpha-Chymotrypsin in Cataract Surgery.** C. D. Townes. *Archives of Ophthalmology*, Vol. 64, p. 108. July 1960.

Alpha chymotrypsin use in 67 cataract operations was compared with another 67 operations performed without the enzyme. Certain serious complications occurring more frequently in the enzyme group were early shallow anterior chamber, prolapse of iris, reopening of the wound, and severe corneal edema. They may be due to a retarding effect of alpha chymotrypsin on wound healing. In order to overcome this a minimum of five corneoscleral sutures should be inserted.

The enzyme should not be used in people over 70 years of age, or in young children.

**Enzymatic Cataract Surgery with Chymotrypsin.** W. Lyda, C. D. F. Jensen and J. L. Hargiss. *Northwest Medicine*, Vol. 59, p. 1026. August 1960.

The use of alpha chymotrypsin in cataract surgery is discussed.

The results in 146 cataract extractions with alpha chymotrypsin were

compared with those in 47 in which the same technique was used but without chymotrypsin. The number of complications observed was minimal. Complications that did occur when chymotrypsin was used invariably were found to be due to factors other than anything attributable to the enzyme.

#### **Experimental Studies on Cataract Formation.**

T. M. Ferguson, A. A. Swanson, J. R. Couch, G. L. Feldman and R. H. Rigdon. *American Journal of Ophthalmology*, Vol. 49, p. 1165. Part II, May 1960.

Experimental cataracts were produced in turkey embryos by feeding hens diets deficient in vitamin E. Cataracts in the deficient embryos showed extensive liquefaction of lens protein, proliferation of the lens epithelium and focal areas of degeneration in the cornea. Cataracts were produced in chick embryos following the injection of dinitrophenol (DNP) into the egg.

Preliminary biochemical studies indicate that oxygen uptake by the liver and succinic dehydrogenase activity of the liver and heart are increased in vitamin E deficiency.

**Tobacco Amblyopia.** H. S. Hedges. *Virginia Medical Monthly*, Vol. 87, p. 144. March 1960.

Although most smokers seem to be immune to the harmful effects of tobacco, many are not. One of the less publicized dangers is tobacco amblyopia. Some victims of this condition experience a series of sudden blackouts, probably caused by constricting spasms of some of the cerebral vessels. Not all of these cases are binocular. When only one eye is involved, the

upper extremity of the same side is often paralyzed. The atrophic type shows a slow breakdown of the part of the retina from which the papillomacular fibers originate.

It is common among women smokers to develop a dull headache and asthenopia on close work followed by premature presbyopia. All of these symptoms disappear with the cessation of smoking.

If tobacco amblyopia is permitted to progress a central scotoma for red and green gradually develops and increases in density until all perception of the two colors is gone. Industrial blindness follows. Again, vision gradually returns if smoking is stopped.

Advanced cases of tobacco amblyopia are all in long time smokers, and the cigar is said to be the worst offender.

**Amblyopia.** R. O. Leavenworth, Jr. *Minnesota Medicine*, Vol. 43, p. 223. April 1960.

It is easy for the physician to demonstrate to parents his concern over their cross-eyed child's deviating eye. It is much more difficult to impress upon them the need for preventing the development of a weak eye in the growing child. Of the two problems, treatment of amblyopia is far more important than treatment of a squint.

Amblyopia in a growing child must be detected and treated before age six to avoid permanent visual disability. Improvement to 20/20 vision can be expected in almost every case. The results are generally less favorable in patients over this age. This presents a strong argument for adequate screening for amblyopia in preschool children.

The detection and etiology of this

condition are discussed, as well as theories of development and results of treatment in amblyopic children age three to nine.

**Strabismus.** H. M. Burian. *The American Journal of Nursing*. Vol. 60, p. 653. May 1960.

Nurses can help with the strabismus problem by disseminating correct information among lay people and by knowing the causes, the classification, and the factors that influence treatment.

Strabismus treatment must be started early and a child should be taken to an ophthalmologist when a squint is first noticed. The misalignment may be due to congenital or acquired paresis or paralysis of one or more of the six extraocular muscles of the eyes, or there may be no evidence of such paralysis. The latter group, to which the bulk of patients with a deviation of the eyes belong, have concomitant strabismus.

This article deals only with concomitant strabismus and discusses surgical and non-surgical treatment.

**Results of Pleoptics in the Management of Amblyopia With Eccentric Fixation.** H. M. Byron. *A. M. A. Archives of Ophthalmology*, Vol. 63, p. 675. April 1960.

All patients exhibiting amblyopia should be visuscoped to most accurately diagnose eccentric fixation. Pleoptics has effected success in some patients with amblyopia. This form of treatment should not be advised indiscriminately because of the time, expense, and inconvenience to the typical outpatient and the lack of overwhelming success. Five of the most important factors in predicting

success are age, intelligence and motivation of the patient, type of eccentric fixation, and the presence of fusional vergences.

If the site of eccentric fixation does not change during the first five treatments, the outlook for any future sustained visual improvement is poor despite temporary success. Surgery and orthoptics should be coordinated with pleoptics in the management of each case. It is felt that pleoptics definitely deserves a role in modern therapy for selected patients with amblyopia and eccentric fixation.

**Association between Maternal Disease during Pregnancy and Myopia in the Child.** P. A. Gardiner and G. James. *British Journal of Ophthalmology*, Vol. 44, p. 172. March 1960.

Two series of consecutive cases of congenital myopia were studied. The mothers were asked about the history of their pregnancies and some information was obtained about siblings. A control group of mothers and children suffering from visual disorders other than congenital myopia were asked the same questions.

The congenital myopes were born far more frequently after pregnancies complicated by serious illnesses and to mothers with toxæmia than were the children with other visual defects. Prematurity was not a feature in the myopic series.

Congenital myopia may be analogous to acquired myopia since the evidence points to its occurrence in a child whose general growth is normal but whose nutrition may be abnormal. It is suggested that more intensive research be directed to discovering the association of the development of normal sight, both intra-uterine and post-

natal, with other factors which may be surveyed from time to time in growing children.

**The Progressive Changes in the Pathology of Early Retrorenal Fibroplasia.** J. F. Chisholm, Jr. *American Journal of Ophthalmology*. Vol. 49, p. 1155. Part II, May 1960.

The author correlates retrorenal fibroplasia as seen clinically with the pathologic findings and presents specimens of the various stages of the disease. Now that it is moderately well controlled interest in it has declined. Yet neither its true etiology nor treatment is known. Sporadic cases without oxygen or in term babies still appear.

The diagnosis of retrorenal fibroplasia is being used too freely. The baby with such a diagnosis receives some palliative care and often does not even receive a careful work-up. All retinal lesions in babies are not retrorenal fibroplasia and greater efforts should be made to diagnose the disease correctly. Other obscure retinal vascular lesions would then be recognized, leading to their correct diagnosis and treatment.

**Rubella in Pregnancy.** J. E. Gray. *British Medical Journal*, No. 5183, p. 1388. May 7, 1960.

Six cases are reported in which pregnancy was terminated in the first trimester because of maternal rubella. Fetal lesions were found in three cases in the ears, heart and eyes respectively. Another had a possible lesion of the lens.

The fetal lesions may be the result of cell destruction following an invasion by rubella virus. It is suggested that the virus may continue to survive, perhaps indefinitely. A further

possibility is that the virus continues to survive in other, and perhaps many, tissue cells since babies affected by this disease seem to have an unduly high mortality rate.

**General Anesthesia for Ophthalmic Surgery in Children.** P. Kushner. *American Journal of Ophthalmology*, Vol. 49, p. 839. April 1960.

A new method of managing anesthesia for eye surgery was used in more than 1,000 pediatric cases. The children in the series ranged in age from nine weeks to 16 years, and 74 per cent were admitted for extraocular muscle surgery.

The main feature of the method is intubation by a modified Flagg technique; the endotracheal adaptor is connected by plastic tubes to a nonrebreathing valve, then through a delivery tube to a "Flagg can." The patient inhales an ether-oxygen mixture fed into the Flagg can from any standard anesthesia apparatus, but exhales to the atmosphere through the nonrebreathing valve, minimizing the accumulation of carbon dioxide. This system makes for smooth and uneventful anesthesia.

In bradycardia, which often occurs during traction on the extraocular muscles, the surgeon did not interrupt his procedure unless the rate fell below 60 beats per minute. In one case the rate fell to 12 beats, in another to 15, but releasing the tension on the eye muscle and ventilation with oxygen quickly restored the pulse to normal. Six postoperative cases of laryngeal edema, attributed to intubation, responded to steam inhalation and antibiotics, with no other complications.

An advantage of this method is that it allows the anesthetist control of the

airway with a minimum of apparatus about the face, leaving a quiet field for the surgeon.

**Optic Neuritis in Children.** C. Kennedy and F. D. Carroll. *A.M.A. Archives of Ophthalmology*, Vol. 63, p. 747. May 1960.

The clinical characteristics of optic neuritis in children were reviewed in 41 cases between the ages of four and 15 over the past 25 years. Follow-up information was obtained in 37 cases.

The optic nerve involvement was found to be related to systemic disease, including congenital syphilis, measles, malnutrition, and diabetes, in six children. Four had hereditary optic atrophy and one had Schilder's disease. Eight had multiple sclerosis, and in the remaining 22 no known causative agent could be determined. There was recurrence in six cases.

Optic neuritis in children was found to differ from that in adults in having a greater tendency to simultaneous bilateral involvement, a greater frequency of headache accompanying the visual symptoms, and almost constantly a greater frequency of papillitis rather than retrobulbar neuritis.

In optic neuritis of unknown cause there appeared to be no benefit from any therapeutic agent with the possible exception of adreno-cortical steroids, which seemed to be of temporary benefit in one child. There appears to be a self-limited course with a tendency to recovery.

**New Developments in the Operating Room.** B. F. Boyd. *Highlights of Ophthalmology*. International Edition, Vol. III, p. 48. 1959.

The new operating room for ophthalmic surgery at the Barraquer In-

stitute, Barcelona is described. It was designed by Prof. Ignacio Barraquer for teaching purposes and to obtain team work with the greatest comfort, rapidity and efficiency.

The most unusual part of this system is the operating room itself. The posterior wall is a plastic, transparent dome which completely separates the room where surgery is performed from the slightly raised amphitheatre where students and visiting ophthalmologists observe the skilled hands of the surgeon and the efficiency of the surgical team. At one end of the viewing room a television screen enlarges surgical procedures as they take place in the eye. Sedative music recorded on magnetic tape is played during the entire operation.

The author describes the new instruments and devices used in this unit, including the Barraquer erisiphake used in extracting the lens in cataract by suction and the surgical microscope which permits the use of high-power magnification with the patient in a horizontal position. The operating chair allows absolute comfort during the surgical procedure and perfect control of hands and fingers by permitting the arms to rest. Colibri forceps reduce the number of necessary instruments. Sable sponge brushes are used instead of cotton pledges or for drying wound areas; also for removing substances adhering to delicate structures without exerting trauma.

**Emotional Factors with Eye Patients.** L. E. Christensen. *The Journal Lancet*, Vol. 80, p. 283. June 1960.

Emotional conflict is involved to some degree in about 75 per cent of persons with eye disorders. The patient's attitudes regarding refractive

errors, wearing and not wearing glasses prescribed, levels of illumination, tinted lenses, the viewing of television, and the use of the eyes as related to organic eye health are important factors in producing eye symptoms. These feelings often result in abnormal, unrealistic, and unjustified eye-consciousness, leading to symptoms which are disabling to some degree and unprofitable financially.

When serious eye disease results in total or near total loss of vision, the emotional response is often incapacitating and seemingly appropriate. Ophthalmologists need the help of psychiatrists, psychologists, and social workers for rehabilitation. The disadvantages of overconcern or abnormal eye-consciousness must be weighed with the disadvantages of no concern in order to arrive at a desirable middle-of-the-road course of action.

**What the Nurse Should Do About Eye Injuries.** W. L. Mould. *Safety Maintenance*, Vol. 119, p. 44. April 1960.

The author outlines the immediate precautionary steps the plant nurse should take in treating such eye injuries as foreign bodies located in the conjunctival sac and those embedded in the cornea, corneal ulcers, flash burns, chemical injury, intraocular foreign bodies, infections of the conjunctiva, perforations, concussion injuries, subconjunctival hemorrhage.

The symptoms associated with an injury of the eye are usually inversely proportional in severity to the importance of the wound. An injury of little consequence is likely to produce severe pain, tearing and redness, whereas a perforating injury may pass unnoticed because of a lack of symptoms. The

pain due to a foreign body in the conjunctival sac starts at the time of injury. The onset of pain is usually delayed for several hours if the foreign body is embedded in the cornea, or if the cornea is abraded.

***Injuries to the Eye and Visual Apparatus Associated with Injury to the Head, Neck, and Chest.*** R. C. Horns. *Minnesota Medicine*, Vol. 43, p. 314. May 1960.

The effects of injuries to the eye are much more severe than similar trauma to other parts of the body because of the delicacy of ocular tissue, and because trauma, which would cause only temporary inconvenience elsewhere, can cause blindness here. Ocular injury is a social and economic hazard which results in great loss of human happiness, in economic inefficiency, and in monetary loss.

Among the conditions discussed are lacerations; concussion and contusion of the globe; ophthalmological findings in injuries to the head, neck, chest and the sympathetic chain; hemorrhage into lids, conjunctiva, and orbit; pupillary phenomena in head injury; visual pathway injuries; ocular motor phenomena; traumatic retinopathy and compression cyanosis.

Although the eye is well protected anatomically, the incidence of injury to this organ is relatively high.

***Vision in the U. S. Armed Forces.*** W. L. Erdbrink. *U. S. Armed Forces Medical Journal*, Vol. II, p. 641. June 1960.

Several important visual problems encountered in the Armed Forces are highlighted and recommendations are proposed for their correction.

The available data indicate that the

visual capacity of military personnel can be an efficient yardstick in determining rate and military occupational specialty (MOS) placement for optimum performance. At the present time the Armed Forces have a system for the physical profiling of personnel, but have no means for correlating this with the demands of the various rates and MOS's. A plan is presented for the development of a physical profile-occupational classification. The proper utilization of visual skills would promote efficiency, safety, economy and morale.

Special problems are considered in the utilization of one-eyed personnel. A group of recent cases of unilateral blindness and enucleation is presented.

The military ophthalmologist should be more than just the eye physician and surgeon for active duty and retired military personnel and their dependents. Many times, definitive eye care for active duty personnel does not end with the period of active treatment; the personality of the man, his rate and duty, and his safety in the performance of duty may also be an important part of his eye care. The military ophthalmologist should, therefore, be an industrial ophthalmologist, concerned with the prevention of eye disease and injury, and with the proper placement of personnel according to their visual capacities.

***Visual Aids for the Partially Sighted.*** E. E. Faye. *Nursing Outlook*, Vol. 8, p. 320. June 1960.

Many legally blind persons have some degree of useful vision ranging from 20/200 to 3/200, which could be improved by a visual aid. Aids occasionally have benefited patients with less than 3/200 and have been of great

value to the partially seeing whose acuity range is about 20/50 and 20/100.

The success of a prescription for a visual aid may be gauged by the use which the patient makes of it. In a highly motivated person success is relatively certain if the eye disease has not destroyed too much vision. Some types of eye conditions respond more favorably than others: those with center field loss such as macular degeneration, and those with generalized diminution of sight as in early diabetes. Those which are not helped by the aids include advanced field loss as in glaucoma, and advanced destruction of the retina from diabetes and other causes.

One of the pioneers in this work was the Low Vision Lens Service at the New York Association for the Blind, The Lighthouse. Dr. Faye is associate director of the service and is attending ophthalmologist at Manhattan Eye, Ear, and Throat Hospital.

**Penicillin Therapy in Trachoma.**  
M. J. Gilkes. *British Journal of Ophthalmology*. Vol. 44, p. 248. April 1960.

The effect of large systemic doses of penicillin used in treating inclusion-positive trachoma was described in an earlier paper (Gilkes, Smith and Sowa). Three of the five cases then described were followed-up 18 months after the original course of treatment. With no further local or systemic therapy all were found to be inclusion-free.

A series of 14 similar cases were treated with oral penicillin for five days. Inclusions still present in two cases disappeared after five days of penicillin injections.

The apparent curative effects of the methods and dosages and some as-

pects of the therapy of trachoma bearing on these results are discussed.

**Diabetic Neuropathy: A Consideration of Factors in Onset.** M. Ellenberg. *Annals of Internal Medicine*. Vol. 52, p. 1067. May 1960.

The arguments presented do not support the generally accepted premise that diabetic neuropathy in almost, if not all, instances follows a period of uncontrolled diabetes. The inconsistencies relating to neuropathy and diabetic control are manifest in several directions: neuropathy may occur during good control; there may be the simultaneous onset of neuropathy and the symptoms of uncontrolled glycosuria; neuropathy may be unrelated to the duration or severity of the diabetes; it may be the initial clinical manifestation of diabetes, unattended by symptoms of hyperglycemia and glycosuria. The paradoxical precipitation of neuropathy following institution of good control of diet, insulin or tolbutamide has been observed. Neuropathy may follow stress situations, and in these instances a relatively constant latent period exists.

The author concludes from a study of a large group of cases that neuropathy in diabetes may be independent of the presence, degree or duration of hyperglycemia and glycosuria. It should be regarded as an essential and integral feature of the syndrome of diabetes mellitus, rather than as a complication of the disease. Awareness of the occurrence of neuropathy as the initial clinical manifestation of diabetes, and the diagnostic application thereof, may help to solve some obscure clinical problems. No known specific etiologic factors resulting in the neuropathy have as yet been de-

terminated. However, the sequence of neuropathy following stress situations after a relatively constant latent time interval suggests the possibility of the presence of an operative toxic or metabolic factor.

**Diabetic Retinopathy.** F. C. Winter. *Journal of the American Medical Association*. Vol. 174, p. 143. September 10, 1960.

The increased life span of the diabetic made possible by the control of the defect of carbohydrate metabolism has brought about a steady increase in the incidence of vascular complications in these patients. This is shown by the fact that the death rate of diabetics from cardiovascular and renal disease is twice that of the general population and by the alarming increase in the rate of new blindness in adults due to diabetic retinopathy. The incidence of such blindness has increased from less than one per cent in 1930 to more than 15 per cent in 1960. Most of the cardiovascular changes are those of aging and senility and except for their premature onset in the diabetic are not different from lesions seen in the general population. The peculiar capillary degenerations of the retina and of the glomerulus, however, are highly characteristic of diabetes and appear to be due to a complex disturbance in lipoprotein and mucopolysaccharide metabolism.

Clinical statistics have demonstrated that the incidence of retinopathy is directly related to the duration of the disease and that the onset of retinopathy can be delayed and its severity limited by careful diabetic control. Despite a major research effort the pathogenesis is not clear and there is no specific treatment. Early

case finding and strict control are the only methods now available for the prevention and modification of the degenerative vascular complications of diabetes.

**Treatment of Corneal Abrasion with Topical Whole Blood.** K. W. Christenberry. *A.M.A. Archives of Ophthalmology*. Vol. 63, p. 948. June 1960.

The instillation of a few drops of blood from the patient's finger into the conjunctival sac has been used routinely during the past 10 years in the treatment of corneal abrasions and has been found to be beneficial. Clinically there is also evidence of pain relief.

Critical examination of the method in the treatment of experimentally induced corneal abrasions in rabbits confirms this clinical impression. Large corneal abrasions healed faster in the 12 rabbits' eyes treated with whole blood than in the control eyes.

**Uveitis Accompanied by a Positive Toxoplasma Dye Test.** H. E. Kaufman. *A.M.A. Archives of Ophthalmology*, Vol. 63, p. 767. May 1960.

Patients with uveitis referred to the National Institutes of Health comprise an "unfavorable" group, many of whom were resistant to previous therapy. Of 84 patients with definitely active uveitis, 36 (43 per cent) showed a complete disappearance of activity after treatment with pyrimethamine (Daraprim) and sulfonamides. An evaluation of the benefits of pyrimethamine and sulfonamide therapy in patients with uveitis and antibodies to Toxoplasma is difficult because of the relapsing nature of the disease and the tendency to spontaneous remissions.

The uveitis responding best to therapy with pyrimethamine and sulfonamides had begun before the age of 20, was unilateral, and was not exclusively anterior.

The toxoplasmin skin test appeared to be an excellent screening test for antitoxoplasmin antibodies and was positive in 95 per cent of patients with positive Toxoplasma dye tests who had not had steroid therapy immediately before skin testing. In only one patient of more than 200 (an atopic patient reacting to all antigens) was the toxoplasmin control positive. It is suggested that this control may be necessary.

**Ro 1-7683/15: A New and Effective Mydriatic.** H. M. Nano, O. Gavarini and H. A. Perez. *American Journal of Ophthalmology*, Vol. 49, p. 958. Part I, May 1960.

The authors experimented with Ro 1-7683/15, a mydriatic drug, in 0.5 per cent solution, and found it effective both for diagnostic purposes and as a cycloplegic in the performance of refraction.

The drug was observed to have advantages over current mydriatics. It is a useful agent in cases of preglaucoma or probable glaucoma. It does not elevate intraocular pressure in normal eyes, in preglaucoma, or chronic simple glaucoma. The quickness of its effects makes it very useful when rapid mydriasis is desired. The drug is effective in all age groups and will probably become widely used for performing routine retinoscopy on children, owing to its fast action on accommodation. It is useful in the operation for cataract.

Though no elevation in intraocular pressure has been observed when used

in cases of glaucoma and probable glaucoma, it would seem wise to protect patients with Diamox administered simultaneously.

**Infections of the Eye.** A. Sorsby. *British Medical Journal*, No. 5182, p. 1352. April 30, 1960.

Infections of the interior of the eye call for immediate and expert treatment. Relatively uncommon, they are seen after intraocular operations, perforating injuries, or in severe infections of the cornea. Subconjunctival injection of some of the antibiotics give good results.

The sulfonamides are valuable in treating ophthalmia neonatorum systemically, and in the after treatment of septic affections in the lid and orbit dealt with surgically. They are of little value in the treatment of intraocular infections owing to their poor penetration.

Penicillin, streptomycin, chloramphenicol and the tetracyclines are widely used systemically and are valuable applied locally. Penicillin is used extensively as a prophylactic measure after removal of corneal foreign bodies and other minor injuries of the eye. Ointments of penicillin, chloramphenicol and tetracyclines are used commonly in the treatment of subacute and acute conjunctivitis and of blepharitis. The outstanding antibiotic administered locally is neomycin. The polymyxins and bacitracin are also useful.

The greatest contribution chemotherapy and the antibiotics have made to ophthalmology probably rests with their effect on trachoma. Local application of sulfonamides has proved a highly effective measure and there is now evidence that chlortetracycline

may give even more rapid results. The antibiotics are also excellent in treating infected corneal ulcers.

Clinical applications in relation to bacterial infections of the outer eye, virus infections, "chronic conjunctivitis," and infected corneal ulcer are discussed.

**Eye Complications Resulting from Systemic Medication.** R. A. Perritt. *The Illinois Medical Journal*, Vol. 117, p. 423. June 1960.

Some eye conditions produced by systemic medications are common enough to warrant emphasis:

Belladonna and its alkaloids in spastic colon have induced glaucoma in susceptible individuals. Artane and caramiphen used to treat parkinsonism cause blurred vision and mydriasis. Quinine can induce toxic amblyopia. The earliest finding is haziness of the disc margins and constriction of retinal arteries. The vision finally returns.

One massive dose of a barbiturate or relatively large amounts taken over a long period may produce the toxic symptoms of ptosis, extraocular palsies, nystagmus and transitory loss of vision.

Color vision may be affected by commonly prescribed medication. Patients receiving santonin or extract of male fern to combat intestinal worms may notice xanthopsia (yellow vision) and the optic discs may show pallor. The digitalized patient may see everything green, blue, yellow or white. In addition, floating spots may appear.

N. P. 207, a drug similar to Thorazine, may lead to blurring of vision to 20/200 in two or three weeks, dilated retinal vessels, pink optic discs, and concentric contraction of fields. Dilat-

tion may produce diplopia, nystagmus, bilateral ptosis, and visual hallucinations. D.D.T. has produced optic neuritis. Herpes zoster ophthalmicus has been observed as a result of arsenic therapy. Prolonged use of the sulfonamides and the salicylates can induce a tendency toward retinal hemorrhage. Sulfonamide therapy may cause scaling of the eyelids, conjunctivitis, transient myopia, transient loss of accommodation, edema of retina, or optic neuritis.

**Prudent Limits for the General Surgeon and Industrial Nurse in Treatment of Ocular Injuries.** E. E. Grossmann. *The Wisconsin Medical Journal*, Vol. 59, p. 257. April 1960.

There is a definite place for the general surgeon in the treatment of eye injuries. This fact has been increasingly recognized. The University of Cincinnati Department of Ophthalmology has offered a four-day course on ocular injuries for the general physician under sponsorship of the Institute of Industrial Health.

The problems that face the general surgeon in an industrial plant are: to determine the extent and severity of the injury; assess the availability of treatment and first aid; and decide which patients should be referred to the ophthalmologist. In order to handle these he must determine the cause of the injury at once. The three general causes—mechanical, thermal and chemical—are discussed.

Recent disasters in the Middle West have pointed up the need of having general surgeons trained to treat eye injuries, since under such emergency conditions there will never be enough ophthalmologists available.

## BOOKS AND PAMPHLETS

**THE PSYCHOLOGY OF DRIVING.** A. R. Lauer. Charles C Thomas, Springfield, Ill. 1960. 324 p. \$10.50.

A number of papers on various phases of highway safety, many of which have been published in magazines and scientific journals, are the basis of this book. In 1928 Dr. Lauer, who is professor of psychology and director of the driving research laboratory at Iowa State University, began his studies of driving behavior at Ohio State University in experimental psychology. He has continued the research at Iowa State. Investigations have been carried on in both laboratory and field, with the cooperation of many organizations concerned with driver and traffic problems, including industrial firms.

The findings, spanning almost an academic generation, include the background of driving research; psychology in traffic control; fundamental safe driving factors; driver education; vision and driving; alcohol and its effect on driving; causes of highway accidents and many other related subjects.

The chapter on vision and driving gives a table of letter ratings as adapted to vision; the proportions having been determined through research in which the vision of thousands of drivers was checked. Five per cent of examinees, for example, have very superior vision and represent class A. Thirty-five per cent of the driving public is quite definitely below average. At least 15 per cent of this group have vision defects that may render them dangerous when driving a car. A restricted operator's license

can handle this group, says the author, especially when they know their visual limitations.

Many vision factors are discussed: recognition; perception; reaction time; speed; road signs; night and winter driving; factors in seeing; vision tests; illumination; distance judgment; and field of vision.

Dr. Lauer emphasizes that many phases of vision should be measured. Instead of requiring a re-examination of drivers every two years (one that usually includes only visual acuity, occasionally field of vision) he suggests a more thorough re-examination less frequently, at least below age 40-45.

About 300 experimental investigations are digested in the book, with excellent documentation.

**TRACHOMA MANUAL AND ATLAS.** Phillips Thygeson, M.D. U. S. Department of Health, Education, and Welfare, Washington 25, D. C. 1960. 47 p. 60 cents.

An eminent authority on trachoma has prepared this manual for use by physicians and nurses in American Indian hospitals and field health units of the Public Health Service. Its primary purpose is to familiarize ophthalmologists and general practitioners working in trachomatous areas with the diagnostic features of the disease; also with its diagnosis as differentiated from nontrachomatous follicular disease and acute and chronic bacterial conjunctivitis.

Many physicians have never observed the signs and symptoms of trachoma because the disease is rela-

tively rare in the United States. However, it is a serious problem among American Indians.

Dr. Thygeson describes MacCallan's classification of the four stages of trachoma, as well as the pannus; associated eye diseases; trachoma treatment and control.

The manual includes a series of photographs showing the gross appearance of the disease in its various stages.

#### **ANTIBIOTICS AND SULFONAMIDES IN OPHTHALMOLOGY.** Arnold Sorsby and

Joseph Ungar. Oxford University Press, New York. 1960. 117 p. \$3.00.

Although many advances have been made during the last 25 years in controlling infectious diseases an important group is still beyond adequate control. Virus disease as a whole remains a menace and a challenge, and the emergence of resistant strains of organisms generally susceptible to antibiotics presents a considerable problem.

An up-to-date guide to present-day practice in the treatment of ocular infections is presented in this pocket-size book. Its three sections deal with the basic considerations in specific diagnosis and treatment of infection; pharmacology and therapeutics; and specific therapy, which implies specific diagnosis of a much finer type than the mere distinction between an infective and a non-infective lesion.

#### **POSITIVE HEALTH OF OLDER PEOPLE.** Betsy Marden Silverman, Editor. National Health Council, New York. 1960. 132 p. \$2.25.

This publication is based on discussions at the 1960 National Health Forum. The Forum preceded by eight months the White House Conference

on Aging scheduled for January 1961 and thus served to prepare the health field for a greater contribution to the conference.

More older people are living longer in the United States than ever before. In this fact lay the challenge of the 1960 National Health Forum—how to assure the health that is essential to independence and dignity for the years that are being added to life. New attitudes toward aging and the aged are necessary if the challenge is to be met successfully.

Dr. Morris Feldstein, a New York ophthalmologist, reported on a study made at the Home for Aged and Infirm Hebrews, New York City, which leads to an optimistic viewpoint as to the vision of aging persons. The beneficial results of surgery were weighed against the risks in a review of 118 major eye operations on patients from 65 to 94 years of age. The declining years of many of these persons were immeasurably brightened by restored vision. Dr. Feldstein stated that undue emphasis on the risks of operation can lead to the withholding of definite benefits.

Other authorities in diverse fields offered valuable suggestions for solving health problems of older people.

#### **RECOMMENDATIONS. COMPOSITE REPORT OF FORUM FINDINGS.** White House Conference on Children and Youth, Washington, D. C. 86 p. 35 cents.

The sixth White House Conference on Children and Youth was held in the spring of 1960 to appraise and attempt to solve specific problems. One of its major goals was to erect guideposts for ten years of meaningful citizen action. Included in this pamphlet are 670 recommendations made by the Forum.

They are intended as a yardstick for social progress when and where they will help in solving the problems of the next decade.

With respect to accident prevention the Forum recommended that state and local health departments initiate crash programs for the protection of young children; that state and local legislation provide for safety in housing, traffic, and supervised play space; and that safety education be included in the school curriculum as early as possible.

It was considered advisable that Federal and state legislation and regulations be broadened to cover all handicaps rather than specific crippling conditions, and that the concept and care of the handicapped child take into account his mental, emotional and social problems.

It was recommended that a section devoted to the physically handicapped be a major subdivision of the 1960 conference followup committees at both national and state levels. Emphasis was placed on evaluating present methods of caring for these children and expanding their educational programs in the public schools.

**HEALTH STATISTICS.** Types of injuries; incidence and associated disability. U. S. Department of Health, Education, and Welfare. Publication No. 584-B16. Government Printing Office, Washington 25, D. C. May 1960. 36 p. 30 cents.

As a part of the U. S. National Health Survey the types of injuries sustained in accidents and the disability resulting from them during the period July 1958-June 1959 are reported. Only injuries that were medically attended or resulted in one or

more days of disability are included.

The data are derived from household interviews obtained in a continuing probability sample of the civilian noninstitutional population. Interviews were conducted in approximately 37,000 households comprising 120,000 persons.

An analysis of the 459,981 total restricted-activity days due to injuries shows that eye injuries accounted for 4,120 days. Of these, 288 days were for off-the-job motor vehicle accidents; 848 for accidents occurring in the home; and 2,983 for those on the job.

**STUDIES OF VISUAL ACUITY AND READING IN RELATION TO LETTER AND WORD DESIGN.**

Jack H. Prince. Institute for Research in Vision, Ohio State University. 1960. 180 p. \$2.75.

The experiments reported in this comprehensive study were undertaken on the premise that much can be done to improve reading comfort and print legibility for readers whose vision is normal or subnormal. The author believes that it is now possible to establish a "near ideal" shape and formation of letters and inter-letter spacing. In future, however, certain modifications may be indicated as the general level of education and reading speed improves.

Dr. Prince is associate professor in the department of ophthalmology and research scientist in the institute for research in vision at Ohio State University, where this work was done. Much of it was supported by grants from the National Institutes of Health, U.S. Public Health Service after recommendation by the National Advisory Neurological Diseases and Blindness Council.

It was found that while special prints can be designed to produce greater legibility than hitherto discovered, and these are described, it is possible to improve on the best existing type faces by a more scientific approach to the way this print is arranged and spaced. This was achieved by studying the resolving power of the eye under different conditions of normality, and in the presence of the numerous eye defects that affect people.

A number of existing type faces are described which come near to meeting the ideal specifications determined by experimentation. A special type face which could be manufactured on a trial basis is also described in detail, and so are other type faces produced by the American Printing House for the Blind to criteria derived from the experiments.

Many factors have been considered in evaluating some of the type faces. Efforts have been made to give full significance to all kinds of eye defects of a wide range of severity, to the intelligence of the subjects, to their age groups, their professions, and to the physical qualities of print such as the relative areas and reflectances of the letters, as well as their degrees of familiarity and numerical recurrence in standard literature.

#### **PATIENT-CENTERED APPROACHES TO NURSING.**

Faye G. Abdellah, R.N., Irene L. Beland, R.N. Almeda Martin, R.N., and Ruth V. Matheney, R.N. The Macmillan Company, New York. 1960. 205 p. \$4.50.

Nurses specializing in the care of patients with eye disorders will profit particularly by a study of this text, though it is directed to the field of

nursing in general. Surely in no other area of nursing is an understanding of the patient's special problems, the goals and means of his therapy, more important than in the care of eye cases.

Results of experimentation and research are reported; overt and covert needs of patients are analyzed. Detailed examples of progressive patient care are presented.

The authors, who are well-known authorities in nursing education, research and administration, emphasize that comprehensive nursing care includes the patient's physical, emotional and sociological nursing needs, as well as consideration of the psychosomatic origin of illness. "The better schools of nursing," they state, "are attempting to gear education for nursing toward this comprehensive approach, rather than toward the functional approach which fractionalizes nursing practice."

#### **FREE AND INEXPENSIVE EDUCATIONAL AIDS.**

Thomas J. Pepe. Dover Publications, Inc., New York. 1960. 289 p. \$1.35.

The author, who is superintendent of schools in Southbury, Connecticut, has compiled for the student, the teacher, and the audio-visual director at all grade levels an extensive list of free and inexpensive educational materials. Over 1,500 books, pamphlets, films, folders, charts and posters are included under such classifications as communications, conservation, guidance and career, health and hygiene, safety, etc. Some of the materials of the National Society are listed under vision. A list of companies and a 53-page index are valuable features. Ninety-four per cent of the material is free.

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